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CIVIL ENGINEERING

Engineering Studies

Site Development

Grading Plans

Improvement Plans

Drainage Plans

Sewer Water Line Plans

Hydrology/Hydraulics

Stormwater SWMP/SWPPP

Construction Administration

Pavement Rehabilitation

Forensic Engineering

Subsurface Utility Engineering

LAND SURVEYING

Property Surveys

Topographical Surveys

Construction Staking

Records of Survey

Legal Descriptions

Subdivision Maps

Easements

Height Certifications

Cadastral Surveys

Photogrammetric Surveys

ALTA Surveys

LAND PLANNING

Pre-Acquisition Analysis

Land Use Consultation

Environmental Analysis

Government Relations

Land Division

Tentative Maps

Major Use Permits

Specific Plans

Rezoning

Variances

Administrative Permits

Annexations

Boundary Adjustments

Subject: Former TM 5254 and current TPM 21193 and BA12-0009

The project proposes a Minor Subdivision (4 parcels and a remainder) and a Boundary Adjustment (4 parcels) to be filed concurrently on the subject property to the north of the Minor Subdivision and under the same ownership. The attached study reviews both proposals. Originally the proposed project was submitted as TM 5254. This TM was withdrawn and a new application for TPM 21193 and BA 12-0009 was submitted for review and processing by the County of San Diego.

Boundary Adjustment (BA 12-0009) reconfigures four existing parcels created per TPM14192 into 42.83, 46.75, 30.90 acres and the southern parcel is 110.03 acres. TPM 21193 proposes 4 parcels and a remainder on the southern parcel. APN 102-102-07 was included in the boundary of TM 5254 but it has been removed from the current proposal.

The pad locations and environmental impact review analyzed in this report for TM 5254 has not significantly changed with this new application.

Sincerely,



Ivan R. Fox PE

SDC DPLU RCVD 03-01-12

TPM21193

BIOLOGICAL RESOURCES AND WETLAND DELINEATION REPORT



PROJECT NAME:

CHANDLER PROJECT

TM 5284 RPL³

ER# 01-01-004A

FALLBROOK / DE LUZ, CALIFORNIA

PREPARED FOR

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TPM21193

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- B. List of animal species detected on-site
- C. Photographs of the project site
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SUMMARY OF FINDINGS

The Chandler Project is a major subdivision creating seven legal lots ranging in size from 20.0 acres to 23.65 acres (net). In addition, the project includes an adjacent boundary adjustment resulting in two lots of 74.4 and 34.2 acres, respectively.

The project site is located north of Fallbrook and east of De Luz, in extreme northwest San Diego County. Most of the site (96%) is in active agriculture, consisting of mature avocado orchards.

A total of 19 visits were made to the site to inventory biological resources, including focused surveys for California Gnatcatchers, Southwestern Willow Flycatchers, Least Bell's Vireos, Arroyo Southwestern Toads, and sensitive plant species. The only sensitive species detected were Red-Shouldered Hawks and Turkey Vultures. No other sensitive species are considered likely to occur.

Habitats on the project site considered sensitive or vulnerable by the County or wildlife agencies include Southern Coast Live Oak Riparian Forest (3.47 acres), Coast Live Oak Woodland (0.17 acres), Freshwater Marsh (0.07 acres), Open Water Wetland (2.33 acres), and Diegan Coastal Sage Scrub (0.38 acres). Most of the wetland habitats on-site are associated with several artificial water impoundments that were created to facilitate farm operations.

No impacts to habitats considered sensitive or vulnerable will result from project implementation. All habitats considered sensitive or vulnerable will be preserved on-site within Biological Open Space Easements.

Project impacts are avoided or reduced to a level of Less than Significant.

INTRODUCTION

This Biological Resources and Wetland Delineation Report was prepared in response to the scoping letters of June 12, 2002, July 7, 2003, June 8, 2004, April 7, 2005, and November 20, 2007 from the County of Diego. Specifically, this report addresses and incorporates information relevant to the biological issues raised in the scoping letters. These issues are addressed in the appropriate sections of this report.

More importantly, this report reflects a significant reduction in the size of the project, from 350.5 acres to 262.25 acres, which resulted from recently instituted County fire protection policies and practices. Consequently, there are significantly fewer biological resources on the project site and no direct impacts under the new project configuration.

Between the most recent iteration of this biology report (12 May 2008), which was accepted as complete by the County on September 17th, 2008, and the date of this report, the project was redesigned but the overall footprint of the project remains the same.

The Chandler Project is now a major subdivision creating seven legal lots ranging in size from 20.0 acres to 23.65 acres (net). In addition, the project includes an adjacent boundary adjustment resulting in two lots of 74.4 and 34.2 acres, respectively.

The project site is located north of Fallbrook and east of De Luz, in extreme northwest San Diego County. The site is situated north of the Santa Margarita River, west of Sandia Creek, and east of Harris Trail. (Figures 1 and 2). Marine Corps Camp Pendleton is located nearby to the southwest. The topography of the site is mostly very steep slopes transected by a major narrow incised drainage. The site is situated between 183 and 305 meters above sea level. The approximate USGS coordinates of the site are 33°25'N, 117°15'W (Fallbrook and Temecula 7.5 minute series quadrangles, Figure 3). The site contains several farm operations buildings and farm worker housing units. The surrounding area, with the exception of the Santa Margarita River and Sandia Creek areas, is mostly developed with agriculture and low-density residential properties (Figure 4).

The project is bordered on the north and west by extensive avocado groves and nursery operations. The area east of the project site is extremely steep descending to Sandia Creek, and is primarily native vegetation. South of the project site is an area formerly included with the project, that consists of primarily of native vegetation and similar farm operations. The project site itself is currently almost entirely in intense agriculture (avocado), transected by a narrow drainage containing wetland-associated vegetation. The drainage is shown on the USGS topographical map as intermittent blue-line stream that drains into Sandia Creek.

This report describes biological resources within the project site and 100 feet beyond on all sides, and proposes measures to avoid or reduce all significant impacts.

METHODS AND LIMITATIONS

To assess the biological resources of the project location, 19 visits have been made to the site. Details of these visits are presented in Appendix E. Thirteen of these visits were made exclusively to conduct focused surveys for sensitive species. One was made to conduct a wetland delineation. During the initial surveys, we were able to examine the entire project site and adjacent areas. Observations on-site were recorded as they were made, and form the basis of this report and the vegetation map. Animals were identified using scat, tracks, burrows, vocalizations, or direct observation with the aid of 10X42 Leica binoculars. Vegetation mapping was conducted in accordance with vegetation community definitions as described in Holland (1986) and Oberbauer (1996). In addition, vegetation mapping on-site was aided by the use of a digital aerial photograph obtained from the Aerial Fotobank. Additional digital photographs were taken on each visit (Appendix C). It should be noted that all vegetation community mapping is verified on the ground to the greatest degree possible in the absence of a systematic land survey. All vegetation areas, boundaries, and fuel modification zone limits are estimates subject to final delineation by a professional land surveyor.

Sensitive Species and Habitats

Prior to the site visits, a variety of sources were reviewed to ascertain the possible occurrence of sensitive species at the project site. First, soil types (Bowman 1973) were checked to determine if the site contains soils known to support sensitive plant species. Records searches for the USGS quadrangle and surrounding quads were done of the California Natural Diversity Data Base (CNDDB) and California Native Plant Society (CNPS) On-Line Inventory of Rare and Endangered Plants. Any sensitive species known to occur in the vicinity were given special attention, and available natural history information was reviewed. Seasonal occurrence patterns (e.g., annual plants, migratory birds) were factored into survey plans in the event that site visits were made during time periods when certain species are not present or conspicuous. Information sources include the Jepson Manual (1993), Rare Plants of San Diego (Reiser 1994), A Flora of San Diego County, California (Beauchamp 1986), San Diego Native Plants (Lightner 2006), U.S. Fish and Wildlife Service Recovery Plans for Threatened/Endangered Species, the San Diego County Bird Atlas (Unitt 2004), and numerous other references, publications, and on-line resources. Typically, 15-20 field guides to various taxa are taken into the field for quick reference if necessary.

A list of sensitive species with potential to occur at the site provided by DPLU after the first submittal was reviewed prior to focused spring surveys. All species on the list were reviewed, and those species requiring directed or focused protocol surveys were noted and given special attention (Appendices D and F). It should be noted that the species covered in Appendices D and F are those addressed based on the previous larger project size and extent.

In the field, potentially sensitive plants species not readily identified *in situ* were photographed and/or collected for identification via keys or other methods. For plant species still not identified, photographs and/or specimens were provided to knowledgeable botanists for identification.

During site visits, all habitats were assessed for their suitability for occupation by any sensitive species with potential to occur.

RESULTS¹

Soils

Based on soil conservation service maps (Bowman 1973), the soils for the project site consist of one type: Cienega very rocky coarse sandy loam, with 30-75% slopes (CmrG). Although a detailed soil analysis is beyond the scope of this report, on-site examination appeared to confirm the presence of this soil type. Numerous large granitic boulder outcrops are found throughout the site.

Botany and Agricultural History

Eight vegetation communities occur on-site: Orchards & Vineyards, Southern Coast Live Oak Riparian Forest, Coast Live Oak Woodland, Freshwater Marsh, Urban/Developed habitats, Disturbed Habitat, Unvegetated Habitat (Freshwater), and Diegan Coastal Sage Scrub. The adjacent parcels contain Non-Native Grassland, Row Crops, Urban/Developed parcels, Orchards & Vineyards, Scrub Oak Chaparral, and Diegan Coastal Sage Scrub.

Most of the project site consists of long-established orchards. There are several existing artificial water impoundments along the course of the main intermittent blue line stream that flows to the east. These water impoundments are supported by well water piped to the upper reaches of the main drainages on the site and runoff from grove irrigation. These artificial agricultural water systems support nearly all the non-oak riparian vegetation on the project site.

A complete floral species list compiled from the site surveys is provided in Appendix A. This list includes species from adjacent areas no longer proposed for development.

Plant Communities

Orchards & Vineyards (Holland Code 18100)

This is the dominant vegetation type on the site, occupying 251.18 acres, or 96 % of the project site. Avocados are the primary crop, with several small areas dedicated to citrus.

Southern Coast Live Oak Riparian Forest (Holland Code 61310) 3.47 Acres

This open to locally dense evergreen sclerophyllous riparian woodland is dominated by coast live oaks *Quercus agrifolia*, with occasional willow *Salix* sp. and western sycamore *Platanus racemosa* trees. Due to the mature, dense canopies of the trees, understory

¹ Scientific and common names for plant species are derived from The Jepson Manual, 1993, U.C. Press; scientific and common names for birds from the A.O.U. Check-list of North American Birds, 1998, Allen Press, Inc.

vegetation is often poorly represented on the project site. Where it does occur, typical understory species include poison oak *Toxicodendron diversilobum*, wild cucumber *Marah macrocarpus*, and a variety of non-native weeds. This habitat type occurs in the main west-east drainage of the project site, and is interrupted by artificial water impoundments, groves, agricultural staging areas and equipment operations, a lawn area, picnic area, and farm worker housing.

Coast Live Oak Woodland (Holland Code 71160) 0.17 Acres

One very small area of this habitat type occurs on the project site, opposite farm buildings within the Boundary Adjustment area.

Freshwater Marsh (Holland Code 52400) 0.07 Acres

This habitat is restricted on the project site to two very small patches bordering a small artificial reservoir in the southwestern corner of the site.

Urban/Developed (Holland Code 12000) 2.40 Acres

As noted above, there are several small areas on the project site that have been developed with farm worker housing and farm operations facilities.

Unvegetated Habitat [Freshwater] (Holland Code 13140) 2.33 Acres

This habitat is restricted to three artificial water impoundments located within the main west/east drainage of the site and the small reservoir in the southwestern corner of the site. The main impoundments lack fringing vegetation, and are mostly abutted by groves and roads. These water impoundments were created when the groves were first established, and serve to conserve and recycle irrigation water and to act as siltation detention basins for flood control and erosion prevention. There is no evidence that these impoundments and the habitat they support would remain in the absence of the artificial agricultural water circulation system currently in place.

Disturbed Habitat (Holland Code 11300) 2.25 Acres

On the project site one small area is appropriately categorized as this habitat type. The Disturbed Area is within the main west-east drainage of the site, and is also used for equipment and material storage and staging. This area is maintained free of vegetation.

Diegan Coastal Sage Scrub (Holland Code 32500) 0.38 Acres

Within the project site, Coastal Sage Scrub (CSS) occurs only in a narrow patch along a grove road that parallels the extreme eastern portion of the main drainage. It is also contiguous with a larger off-site area of CSS in public ownership. This small patch thus has good prospects of maintaining the functions and values of CSS over the long term, and will be protected within a proposed Biological Open Space Easement.

Zoology

Wildlife recorded during the surveys include common and expected species for the habitats that occur on-site. A total of 31 species of birds, five species of mammals, and four species of reptiles and amphibians were recorded during the site surveys. A complete list of animals detected on-site is provided in Appendix B. This list includes species from areas within the previous 350.5 acre project configuration which are no longer proposed for development.

Sensitive Resources

Sensitive plants or animals are defined here as species of rare, threatened, or endangered status, or depleted or declining species according to the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), or California Native Plant Society (CNPS). Sensitive habitats include those which are considered rare or vulnerable in the region, or support sensitive plants or animals. In addition, species of concern to the County of San Diego with medium or high potential to occur on-site are discussed below and in Appendix D.

Sensitive Habitats

Five sensitive habitats occur within the project site: Southern Coast Live Oak Riparian Forest, Coast Live Oak Woodland, Freshwater Marsh, Unvegetated Habitat (Freshwater), and Diegan Coastal Sage Scrub.

Southern Coast Live Oak Riparian Forest, Freshwater Marsh, and Unvegetated Habitat (Freshwater) are riparian wetland habitats and are protected by the County's Resource Protection Ordinance (RPO). The County RPO requires preservation of RPO-defined wetlands and wetland buffers, with very few allowed uses and exemptions. Riparian (wetland) habitat is considered a valuable but declining resource. This habitat type covered less than 0.2 percent of San Diego County in 1965, and the amount has declined since. The County has a "no net loss" policy of wetland habitat protection. Wetland areas are also often within the jurisdiction of the CDFG (Section 1600 *et seq.* of the Fish and Game Code), the U.S. Army Corps of Engineers (USACE) and California Regional Water Quality Control Board (RWQCB) under Sections 404 and 401 of the Clean Water Act, respectively.

Diegan Coastal Sage Scrub is also sensitive and protected. Permanent removal of this habitat can only be accomplished with a Habitat Loss Permit (HLP) and with suitable mitigation. The County and the wildlife agencies consider this habitat type sensitive and, under the Natural Communities Conservation Plan (NCCP) and CEQA, requires mitigation for impacts associated with development, even in the absence of threatened or endangered species.

Surveys were conducted with special attention to looking for plant and animal species and habitats that are considered sensitive according to the USFWS, CDFG, CNPS, and that are listed on the CDFG's Natural Diversity Database (CNDDB) record for the Fallbrook and Temecula 7.5 minute quadrangles. The site lacks the appropriate habitat to support most sensitive species.

Sensitive Wildlife

Those species recorded on the CNDDDB for the Fallbrook or Temecula USGS quads, or on the County of San Diego list of species of concern with a moderate or high likelihood of occurring, are discussed below:

LEGEND

Common Name

Scientific name

CNDDDB or County List

Status

FE = Federal Endangered

FT = Federal Threatened

PE = Proposed Endangered

PT = Proposed Threatened

FSC = Federal Special Concern Species

SE = State Endangered

ST = State Threatened

SR = State Rare

CSC = State Special Concern Species

CEQA = Consideration required

Cooper's Hawk

Accipiter cooperi

County List

CSC

Cooper's Hawks often forage in search of small birds over a variety of habitats. This urban-adapted species also occurs in oak woodlands and developed/residential areas. They are a common resident and migrant species in San Diego County. Although this species has apparently declined throughout much of California, there is no evidence for a breeding population decline in San Diego County. No Cooper's Hawks have been seen during the site surveys, but their occurrence would not be surprising. The project would not adversely affect the species, thus no impacts are expected.

Red-shouldered Hawk

Buteo lineatus

County List

Red-shouldered Hawks are common and widespread residents and migrants in San Diego County, occurring in a wide variety of habitats including developed orchards and residential areas. Their population has increased dramatically in the last 100 years, and they are now extremely common in urban settings. It can be stated with a high degree of certainty that urbanization and agriculture have been beneficial for this species. The species was recorded during site surveys, and the project site may occasionally be used as nesting or foraging habitat, but project development is unlikely to have any adverse impacts because this species has a high degree of adaptability to human-altered habitats and human disturbance, especially in Southern California (Bloom, et. al. 1993).

Turkey Vulture
Cathartes aura

County List

Turkey Vultures forage for carrion over a variety of habitats. They are common migrants and winter residents in San Diego County, and were a formerly more common breeding species. The site is occasionally used as foraging habitat for this species. They were observed during the site surveys (during migration), however, impacts to this species are not anticipated. Turkey vultures are highly sensitive to disturbance at their nests. Due to grove operations it is unlikely that they nest on the site.

Least Bell's Vireo
Vireo belli pusillus

CNDDDB / County List
FE / SE

The Least Bell's Vireo is listed as endangered by both the state and federal governments. Available census data indicate that the Least Bell's Vireo population in Southern California increased from an estimated 300 pairs in 1986 to 1,346 pairs in 1996. Its breeding habitat is restricted to mature willow riparian woodland. Most frequently, it occupies extensive areas that combine an understory of dense young willows or mulefat with a canopy of tall willows. The most critical structural component is a dense shrub layer 0.6-3.0 meters above ground. The vireo's decline is due to loss of riparian habitat combined with nest parasitism by the Brown-headed Cowbird, which lays its eggs in vireo nests thereby reducing the vireo's reproductive success.

Nesting adults are relatively tolerant of human interference at the nest and minor habitat modifications near the nest; nest abandonment due to these factors is low (Brown 1993). However, vireos are susceptible to predation by domestic cats that may be present as a result of residential development.

Potential for this species to occur or breed within the project site is low due to the lack of suitable willow-dominated riparian habitat with dense native understory. Nevertheless, focused surveys were conducted for this species within all riparian habitat on the project site. Breeding vireos are highly vocal with a distinctive song. The nearest site occupied by this species is on the Santa Margarita River nearby in Camp Pendleton in more suitable habitat.

No Least Bell's Vireos were detected during focused surveys (See Appendix F), and none are considered likely to occur.

Southwestern Willow Flycatcher Discussion

The Southwestern Willow Flycatcher *Empidonax traillii extimus* is a small insectivorous bird that breeds in dense riparian habitats across the southwestern United States. Once locally common and widely distributed, the southwestern willow flycatcher has suffered dramatic population declines during the 20th century, primarily due to hydrologic and habitat alteration of rivers and streams and brood parasitism by the Brown-headed Cowbird. It was listed as Federally Endangered in 1995, State Endangered in 1990.

Southwestern Willow Flycatchers measure about 5.75 inches (15 cm) in length, and weigh only about 0.4 ounces (12 g). Overall, it is roughly the size of a small sparrow. Both sexes look alike. The flycatcher's appearance is overall greenish or brownish gray above, with a white throat that contrasts with a pale olive breast. The belly is pale yellow. Two white wing bars are visible, but the eye ring is faint or absent. The upper mandible is dark, and the lower mandible light. It closely resembles the other races of Willow Flycatcher, and several other species of the *Empidonax* genus, particularly the closely-related Alder Flycatcher (*Empidonax alnorum*). The *Empidonax* flycatchers are renowned as one of the most difficult groups of birds to distinguish by sight alone.

Prior to being listed as an endangered species in 1995, the Southwestern Willow Flycatcher was seldom studied, and as a result there was a dearth of information on the bird's basic ecology, natural history, distribution, and status.

The Southwestern Willow Flycatcher is a neotropical migrant, which means it breeds in North America and spends the winter in Central America. Its breeding range includes Southern California (from the Santa Ynez River south), Arizona, New Mexico, extreme southern portions of Nevada and Utah, extreme southwest Colorado, and western Texas.

Almost all Southwestern Willow Flycatcher breeding habitats are within close proximity (less than 20 yards) of water or very saturated soil. This water may be in the form of large rivers, smaller streams, springs, or marshes. At some sites, surface water is present early in the nesting season, but gradually dries up as the season progresses. Ultimately, the breeding site must have a water table high enough to support riparian vegetation.

Southwestern Willow Flycatchers are communal breeders, meaning that most known breeding locations support a number of pairs. Solitary breeding pairs are rare. This pattern is likely the result of the species' philopatric nesting habits; they return each year to the same nesting locale. Dispersing young seem to also return to the natal breeding grounds. This behavior tends to slow the process of range expansion, even when suitable habitat is available.

In San Diego County, Southwestern Willow Flycatchers are rare, and primarily occur only along major riparian corridors or in areas of extensive riparian habitat adjacent to large reservoirs. The largest local breeding population is on the extreme upper San Luis Rey River, very close to Lake Henshaw. At this locale, they occupy Oak Riparian Woodland, unusual behavior that is suspected to be a habitat "artifact" as the result of water management practices that have significantly altered vegetation communities over the last century (Bill Haas, Pers. Comm.).

Elsewhere in San Diego County, colonial nesting is also known from the Santa Margarita River (Camp Pendleton). There have been reports of pairs breeding in dense willow forests at the upper end of El Capitan Reservoir and Sweetwater Reservoir. Nesting pairs have also been documented in the Agua Tiba Wilderness (Phil Unitt, Pers. Comm.).

At the project site, the riparian vegetation lacks the dense lower, middle, and canopy vegetation cover that the species requires. Nevertheless, focused surveys were conducted for this species within all riparian habitat areas on the project site. This includes several areas no longer within the scope of the project as currently configured. No Southwestern Willow Flycatchers were detected during focused surveys (See Appendix F), and none are considered likely to occur.

Coastal California Gnatcatcher Discussion

Because there are several very small areas of Diegan Coastal Sage Scrub located on the project site, and larger areas occur in the vicinity, discussion is warranted regarding the possibility of the California Gnatcatcher occurring on-site. The California Gnatcatcher *Poliophtila californica* is a federal threatened species, a state species of concern, and is a "target species" of the NCCP process. This species is a non-migratory resident whose range covers the coastal plains and foothills of Southern California and northern Baja California. In San Diego County, it is widespread in coastal lowlands below about 2,000 feet elevation and typically occurs in or near CSS. The California Gnatcatcher is seriously declining due to loss of habitat. Between 85% and 90% of this species' habitat has been lost to urban or agricultural development. It is almost extirpated from Ventura, San Bernadino, and Los Angeles counties. The population is estimated to be just under 5000 pairs. San Diego County appears to be the center of abundance within the United States for this species.

On the project site, areas of CSS were surveyed according to U.S. Fish and Wildlife protocol survey methods (Appendix F). This includes extensive areas no longer within the scope of the project as currently configured. No gnatcatchers were detected and none are considered likely to occur.

Arroyo Toad
Bufo microscaphus californicus

CNDDDB / County List
FE

The arroyo toad was listed as endangered by the U.S. Fish and Wildlife Service in December, 1994. Reasons for this species decline include habitat loss and predation by introduced bullfrogs. In 1994 there were only 22 known populations of this species. The arroyo toad is restricted to rivers that have shallow, gravelly pools adjacent to sandy terraces. Breeding occurs on large streams with persistent water from late March until mid-June. Eggs are deposited and larvae develop in shallow pools with minimal current and little or no emergent vegetation and with sand or pea gravel substrate overlain with flocculent silt. After metamorphosis (June or July), the juvenile toads remain on the bordering gravel bars until the pool no longer persists (3 to 8 weeks, depending on site and year). Juveniles and adults forage for insects on sandy stream terraces that have nearly complete closure of cottonwoods (*Populus* spp.), oaks (*Quercus* spp.), or willows (*Salix* spp.), and almost no grass and herbaceous cover at ground level. Adult toads excavate shallow burrows on the terraces where they shelter during the day when the surface is damp or during longer intervals in the dry season.

Examination of databases from the U.S. Fish and Wildlife Service and U.S. Geological Survey indicate that there are no known arroyo toad breeding locations within a kilometer of the project site. The nearest known locations of occurrence in the vicinity include the Santa Margarita River on Camp Pendleton, more than a kilometer west of the project site (Robert Fisher, USGS, Pers. Comm.).

A habitat assessment and protocol surveys for this species were conducted at the project site. This includes areas no longer within the scope of the project as currently configured. No

arroyo toads were detected during focused surveys (See Appendix F), and none are considered likely to breed on the site. The possibility that some grove/upland habitats are occasionally used by arroyo toads cannot be completely ruled out, because potential breeding habitat occurs on the Santa Margarita River (which is less than a kilometer from the project site). However, in order for arroyo toads to disperse, there must be a suitable "pathway" over which they can travel (B. Haas, pers. comm.). Drainages are often used by arroyo toads for dispersal when terrain and vegetation do not obstruct movement. Between the River and the project site, the drainages are extremely steep and incised and filled with dense vegetation. No suitable movement pathway between the potential breeding habitat and the project site exists.

Raptor Foraging Habitat

Oak riparian and wetland habitats on the project site may provide foraging opportunities for species such as Cooper's Hawk and Red-shouldered Hawk. These habitats will be preserved on-site.

Significant foraging habitat for a variety of raptor species occurs east and south of the project site, on steep slopes leading to Sandia Creek and the Santa Margarita River. However, prior to the Gavilan Mountain fire of September 2000 these areas likely also contained dense vegetation that precluded much raptor foraging. Project implementation will not impact these off-site areas.

No foraging habitat for Golden Eagles *Aquila chrysaetos* occurs on the project site. The nearest potential nesting site for this species is on Gavilan Mountain, over 2.54 miles (13,000 feet) northeast of the project site.

Sensitive Plant Species

Two sensitive plant species Orcutt's brodiaea *Brodiaea orcuttii* and California Walnut *Juglans californica* are contained in the potential list of sensitive species for the project site (Appendix D). California walnut trees are conspicuous and would have been noted during botanical surveys if the species was present on the project site. Special attention was given to looking for Orcutt's brodiaea during spring and early summer site visits. None were observed and none are considered likely to occur due to the lack of suitable soil conditions.

No sensitive plant species were observed during the site surveys and none are considered likely to occur.

Wildlife Movement Corridors and Native Wildlife Nursery Sites

A wildlife corridor can be defined as a linear landscape feature allowing animal movement between two larger patches of habitat. Connections between extensive areas of open space are integral to maintain regional biodiversity and population viability. In the absence of corridors, habitats become isolated islands surrounded by development. Fragmented habitats support significantly lower numbers of species and increase the likelihood of local extinction for

select species when they are restricted to small isolated areas of habitat. Areas that serve as wildlife movement corridors are considered biologically sensitive.

Wildlife corridors can be defined in two categories: regional wildlife corridors and local corridors. Regional corridors link large sections of undeveloped land and serve to maintain genetic diversity among wide-ranging populations. Local corridors permit movement between smaller patches of habitat. These linkages effectively allow a series of small, connected patches to function as a larger block of habitat and perhaps result in the occurrence of higher species diversity or numbers of individuals than would otherwise occur in isolation. Target species for wildlife corridor assessment typically include species such as bobcat, mountain lion, and mule deer.

To assess the function and value of a particular site as a wildlife corridor, it is necessary to determine what areas of larger habitats it connects, and to examine the quality of the corridor as it passes through a variety of settings. High quality corridors connect extensive areas of native habitat, and are not degraded to the point where free movement of wildlife is significantly constrained. Typically, high quality corridors consist of an unbroken stretch of undisturbed native habitat.

On the project site, the drainages containing riparian forest and other wetland habitat are highly disturbed. To the west and north, these drainages naturally terminate at their upper end due to topography. The entire area where the drainages reach their upper terminus is dense orchards. At their upper limit, the drainages do not connect with any undisturbed habitat.

Within the east/west drainage of the project site native habitats occur as narrow linear patches separated by crossings, orchards, farm operations areas, and developed areas. At the western (upper) terminus of the drainage, passage of wildlife that typically use corridors is precluded by gates, chain-link, and wrought iron fencing (Photograph 6). In many places the fencing is overgrown with dense ornamental vegetation that precludes wildlife from even seeing through the fencing. Wildlife would even be precluded from using roads west of the project site due to the existing fencing. West of Harris Trail, the drainage to the west lacks native vegetation for over 1,500 feet. Fencing occurs at several locations in the upper reaches of this drainage.

The drainages on the project site therefore are not wildlife corridors that allow passage of wildlife and connect areas of native habitat, but rather consist of narrow, linear patches of wetland habitat that are significantly blocked.

Native Wildlife Nursery Sites, which are considered sensitive resources that require protection, are defined in the County of San Diego Guidelines for Determining Significance - Biological Resources as "sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies". Features such as individual raptor or woodrat nests do not constitute places where wildlife *concentrate*, thus they do not meet this definition and are therefore not considered Native Wildlife Nursery Sites. No Native Wildlife Nursery Sites occur on the site or will be impacted by project implementation.

PERMITTING

Impacts to wetland habitats require County, State, and Federal permits. It is typically necessary to obtain permits to comply with the CDFG Section 1600 "Streambed Alteration Agreement" requirements, Army Corps of Engineers Section 404 of the Clean Water Act, and Section 401 Water Quality Certification.

Riparian habitat is considered a sensitive resource by the California Department of Fish and Game. This habitat is defined as a wetland by the U.S. Fish and Wildlife Service. Riparian habitat is specifically addressed by the Department of Fish and Game Code Sections 1600-1606 (Streambed Alteration Agreement), and wetlands (blue line streams) are also under the jurisdiction of the U.S. Army Corps of Engineers and Regional Water Quality Control Board permit process.

No impacts to jurisdictional wetlands will result from project implementation, including impacts to areas designated as wetland buffers. All wetlands on-site will be protected by means of Biological Open Space Easements and appropriate buffers.

As noted above, Diegan Coastal Sage Scrub is also sensitive and protected. Permanent removal of this habitat can only be accomplished with a Habitat Loss Permit (HLP) and with suitable mitigation. The county and the wildlife agencies consider this habitat type sensitive and, under the Natural Communities Conservation Plan (NCCP) and CEQA, requires mitigation for impacts associated with development, even in the absence of threatened or endangered species. Because none of this habitat type will be impacted, no HLP is required.

SIGNIFICANCE CRITERIA

Direct impacts occur when biological resources are altered or destroyed during the course of, or as a result of, project implementation. Examples of such impacts include removal or grading of vegetation, filling wetland habitats, or severing or physically restricting the width of wildlife corridors. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing. Indirect impacts may include elevated levels of noise or lighting, change in surface water hydrology within a floodplain, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive species. Permanent impacts may result in irreversible damage to biological resources. Temporary impacts are interim changes in the local environment due to construction and would not extend beyond project-associated construction, including revegetation of temporarily disturbed areas adjacent to native habitats.

The California Environmental Quality Act (CEQA) Guidelines define "significant effect on the environment" as a "substantial, or potentially substantial adverse change in the environment." The CEQA Guidelines further indicate that there would be a significant effect on biological resources if the project will:

- A. Substantially affect an endangered, rare or threatened species of animal or plant or the habitat of the species.

- B. Interfere substantially with the movement of any resident or migratory fish or wildlife species to the extent that it adversely affects the population dynamics of the species.
- C. Substantially diminish habitat for fish, wildlife, or plants.

THRESHOLDS OF SIGNIFICANCE

Based on the CEQA significance guidelines and requirements, the County of San Diego is establishing specific thresholds of significance to be considered when evaluating potential or actual project impacts. The following is an analysis of specific thresholds of significance for this project. Findings of Fact for the listed potential thresholds are in italics. Where thresholds are exceeded, and impacts are considered significant, responses are numbered and addressed in the mitigation section:

Project Design

- A. Will project-related improvements or activities within or adjacent to local corridors, regional linkages or other areas utilized for wildlife movement:
 - 1. Prevent wildlife from accessing areas considered necessary for their survival (i.e., foraging resources, breeding areas, etc.);

No. Project design and off-site drainages allows free access of wildlife between the project site and Sandia Creek and the Santa Margarita River, the nearest local and regional corridors and linkages. Significant areas of undisturbed habitat under public ownership are located east and south of the project site.
 - 2. Restrict wildlife from utilizing their natural movement paths (i.e., those paths used when given the choice absent human interference);

No. Project design maintains the current pathways that allows wildlife to move within the major drainage on-site. As discussed in the Wildlife Corridor section above, existing physical barriers in the main drainage preclude passage of wildlife through the site.
 - 3. Further constrain an already narrow corridor by reducing width, removing available vegetative cover, creating edge effects or placing barriers in the movement path.

No. As the drainage on-site is not a wildlife corridor, project implementation will not result in significant impacts to a corridor.
 - 4. Create artificial corridors that do not follow natural movement patterns.

No. Project design does not create any artificial corridors.

B. Will there be a decline in the value and function of on or off-site habitat that may occur as a result of substantial edge effects, including but not limited to:

1. Post-construction noise levels in excess of 60db during daytime hours and 50 db during nighttime hours.

No. Project design allows for rural residential use which does not result in excessive noise levels.

2. Artificial light shining in excess of 0.005 foot candles (half as bright as a full moon).

No. Typical residential exterior light applications do not exceed 0.005 foot candles.

3. A drawdown of the groundwater table of three feet or more (for groundwater dependent species or habitat);

No. Conversion from agricultural operations (avocados) will significantly decrease current levels of groundwater use.

4. Encroachment of any kind, including, but not limited to, unauthorized clearing within preserved areas, trash dumping or off-road vehicle traffic;

No. Project design will include signage and fencing, as appropriate, to prevent encroachment into preserved areas.

5. Change in vegetation caused by invasive plants from adjacent ornamental landscaping.

No. There is no evidence that preserved habitats on-site will be invaded by ornamental landscaping.

6. Predation of native species by unrestrained domestic cats.

No. Although it is possible that unrestrained domestic cats could occasionally prey on native species, this predation would likely occur on common and abundant species, and will thus not result in a significant impact.

7. Water runoff or underground seepage causing a change in natural moisture levels and/or increasing the spread of pollution and pesticides.

No. Conversion from agricultural operations (avocados) will significantly decrease current levels of water use, resulting in more natural soil moisture conditions. Stormwater BMPs will reduce the spread of pollution and pesticides.

Sensitive Habitat

- C. Will any of the following activities occur within County defined wetlands: removal of associated vegetation; grading; obstruction or diversion of water flow; change in velocity or siltation rate; placement of fill; placement of structures; placement of culverts or other underground piping; any disturbance of the substratum:

No. Project design avoids impacts to wetland habitat.

- D. Will County Group A or B habitat within an area of native or naturalized habitat more than one acre in size will be removed through grading, clearing, or other activities.

No. Project implementation will not result in the cumulative loss of Coastal Sage Scrub.

- E. Will County Group C habitat within an area of native or naturalized habitat more than one acre in size will be removed through grading, clearing, or other activities.

No. Project implementation will not result in the loss of County Group C habitat.

Sensitive Species

- F. Will direct, indirect and/or cumulative impacts occur that may be detrimental to the regional long-term survival of a Group II animal or Group C or D plant species as listed by the County of San Diego including:

1. Any impacts to a local population that is regionally significant;
2. Any impact to a core block of habitat or critical linkage for this without which the species may not survive.
3. Any impact to individuals on-site that will interfere with regional conservation efforts or goals for this species.

No. No Group II animal or Group C or D plant species as listed by the County of San Diego occur or are expected to occur on the project site.

- G. Will there be direct, indirect and/or cumulative impacts that may reduce the local population of a plant species listed as State or Federally Threatened or Endangered, MSCP critical populations, MSCP Narrow Endemics or Group A or B by more than 20% or cause impacts that may be considered detrimental to the regional long-term survival of this species.

- No. *No plant species listed as State or Federally Threatened or Endangered, MSCP critical populations, MSCP Narrow Endemics or Group A or B occur or are expected to occur on the project site.*
- H. Will direct, indirect and/or cumulative impacts reduce the estimated local population of an animal species listed as State or Federally Threatened, Endangered or Species of Special Concern, MSCP Narrow Endemics or Group I by more than 20% or cause impacts that may be considered detrimental to the regional long-term survival of this species.
- No. *No animal species listed as State or Federally Threatened, Endangered or Species of Special Concern, MSCP Narrow Endemics or Group I occur or are expected to occur on the project site.*
- I. Will grading, clearing, construction or other activities, except for passive recreation, occur within 500 feet of occupied breeding or non-breeding wetland habitat for the arroyo southwestern toad (this distance may be extended up to one kilometer depending on the suitability of intervening habitat).
- No. *No arroyo southwestern toad or toad habitat occurs on or within 500 feet of the project site. Habitat between the site and suitable habitat is not appropriate for toad movement, as no clear movement pathway required by arroyo southwestern toads exists.*
- J. Will any of the following activities during the periods and within the distances listed below impact golden Eagles.
1. Grading, clearing, or construction within 4000 feet of an active golden eagle nest during the breeding season (February 15-July 15).
 2. Passive recreation within 4000 of an active golden eagle during the breeding season (February 15-July 15).
 3. Residential, commercial, industrial, civic, extractive use, agricultural, active recreational or any other development be permanently located within 4000 feet of an active golden eagle nest.
- No. *No golden eagle nests occur or are likely to occur within 4000 feet of the project site.*
- K. Will grading, clearing or construction occur within the following distances and within the following time periods for one or more of the these species:

<u>Species</u>	<u>Distance</u>	<u>Breeding Season</u>
California Gnatcatcher	300' from occupied habitat	Feb 15-Aug 30
Least Bell's Vireo	300' from occupied habitat	Mar 15-Sept 15
Southwestern Willow Flycatcher	300' from occupied habitat	May 1-Sept 1
Tree-nesting raptors	300 feet from active nest	Feb 15-July 15

Ground-dwelling raptors 300 feet from active nest Feb 15-July 15

Possibly. (Mitigation item #1).

Although no tree-nesting raptors were detected during the site surveys, there is a likelihood that construction and related activities could occur within 300 feet of a nesting common raptor species. No other of the species listed occur on or within 300 feet of the project site.

- L. Does the project conform to the requirements regarding wetlands, wetland buffers or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).

Yes. The project conforms to the requirements regarding wetlands, wetland buffers or sensitive habitat lands as outlined in the RPO.

- M. Does the project conform to the goals and requirements of the Habitat Loss Permit (HLP) Ordinance or Natural Community Conservation Plan (NCCP).

Yes. The project conforms to the goals and requirements of the Habitat Loss Permit (HLP) Ordinance and Natural Community Conservation Plan (NCCP).

- N. Does the project conform to the goals and requirements of applicable state or federal regulations, including, but not limited to, the Federal Endangered Species Act, Migratory Bird Treaty Act, Bald Eagle Protection Act, Clean Water Act, Porter-Cologne Water Quality Act and the California Fish and Game Code.

Yes. The project conforms to the goals and requirements of applicable state or federal regulations, including, but not limited to, the Federal Endangered Species Act, Migratory Bird Treaty Act, Bald Eagle Protection Act, Clean Water Act, Porter-Cologne Water Quality Act and the California Fish and Game Code.

PROJECT IMPACTS

Direct Impacts

The project as currently proposed will not impact sensitive habitats. Areas of Southern Coast Live Oak Riparian Forest, Coast Live Oak Woodland, Freshwater Marsh, Unvegetated Habitat (Open Water), and Diegan Coastal Sage Scrub will be conserved on-site and impacts thereby avoided. A tabulation of project impacts is presented in Table 1.

Table 1. Existing, impacted, and preserved habitat on the project site.

PLANT COMMUNITY	ACREAGE ON-SITE	IMPACTED ACREAGE	ACREAGE PRESERVED ON-SITE	ACREAGE IMPACTED OFF-SITE	MITIGATION REQUIRED (Ratio)
Orchards & Vineyards	251.18	N/A	N/A	N/A	N/A
Southern Coast Live Oak Riparian Forest	3.47	0	3.47	0	0
Coast Live Oak Woodland	0.17	0	0.17	0	0
Freshwater Marsh	0.07	0	0.07	0	0
Urban / Developed	2.40	N/A	N/A	N/A	N/A
Unvegetated Habitat (Wetland)	2.33	0	2.33	0	0
Disturbed Habitat	2.25	N/A	N/A	N/A	N/A
Diegan Coastal Sage Scrub	0.38	0	0.38	0	0
TOTAL	262.25	0	6.42	0	0

Concern regarding potential direct or indirect impacts from noise related to an existing water pump on the project site (located near sensitive resources) was raised in the County scoping letter of November 7, 2007. This concern required that a Noise Study and Analysis be conducted by a County-approved noise consultant. This Study (included in submittal package) proposes mitigation measures that will reduce any potential or actual noise-related impacts to below a level of significant, and bring the noise levels into conformance with the County Noise Ordinance and Noise Element. Thus, no direct or indirect impacts to sensitive resources will result from noise-related activities on the project site.

Off-site Impacts

No off-site impacts will result from project implementation, including fire clearing requirements and impacts from road improvements and cut and fill slopes. (See project Fire Protection Plan).

Indirect Impacts

There is the potential for indirect impacts to occur as a result of implementation of the proposed project. The areas where indirect impacts have the potential to occur could extend from the development edge into conserved habitat due to such activities as excessive landscape irrigation, vegetation trampling outside developed areas, and introduction of non-native species (e.g., argentine ants, cats, non-native invasive plant species). These indirect impacts are referred to as "edge effects." There is the potential for indirect impacts on animals as a result of an increase in noise, dust, and light during construction activities and from vehicle use. There is also the potential for the introduction of "urban" runoff into the major drainages. These indirect impacts are considered unavoidable due to the size of the project, agricultural uses on-site, and existing surrounding land uses.

Indirect impacts from edge effects are considered adverse, but not significant, because the site is mostly disturbed and existing edge effects are already dominating the site. Additional effects would be incremental. The potential for increased sediment load to the drainages associated with construction is considered adverse, but can be avoided by use of Best Management Practices (BMPs) to minimize sedimentation. In addition, permanent open space fencing will be installed at all locations where topography does not preclude direct impacts from preserved areas. Permanent signage will be placed at 100' intervals along the edge of all Biological Open Space areas.

The proposed change from agricultural use to residential agricultural use could reduce direct and indirect impacts from the existing agricultural operations. A reduction in the use of groundwater, pesticides and fertilizers would likely result. Conversion to residential uses would also reduce irrigation needs, thereby reducing the potential impacts of agricultural runoff to riparian habitats on and off-site.

Cumulative Impacts

Cumulative impacts consider the potential regional effects of a project and how a project may affect an ecosystem or one of its components beyond the project limits and on a regional scale. If implemented, the proposed project would not result in additions to cumulative loss of sensitive habitats within San Diego County. All habitat on-site will be conserved within biological open space easements.

MITIGATION MEASURES

The following mitigation measures are recommended to offset potential impacts to sensitive habitats:

1. Mitigation for potential impacts to tree-nesting raptors will be accomplished by conducting breeding raptor surveys if construction or related activities occur between February 15 and July 15 of any year. If the survey is positive for nesting raptors within 300 feet of the activity, then the construction activities would be delayed. The survey shall be done within one week of activity. This mitigation will reduce this potential impact to Less than Significant.
2. Implementation of Best Management Practices (BMPs) during construction, such as erosion and sediment control and the diversion of runoff water to detention basins, will reduce impacts from temporary construction activities to a level less than significant. Temporary construction fencing will be used in areas where activity will occur within 300 feet of biological open space easements.
3. Five foot high permanent fencing will be installed in all areas where direct impacts might encroach on sensitive habitats. Permanent open-space signage will be installed at 100 foot intervals along open space boundaries.

The project design and mitigation as proposed is deemed to be adequate to reduce the potential impacts of the proposed project to a level Less than Significant.

The following recommendations are made regarding conditions of the open space easements:

1. Because some of the areas to be designated as biological open space easements are currently part of active and ongoing farm operations, easements should be conditioned to allow for continued agriculture (as is currently practiced - not expanded) until such time as agriculture is abandoned in any given lot. At that time the easement area will revert to the same conditions that typically apply to biological open space easements.
2. Existing grove roads that transect open space easements or buffers will be allowed to be used and maintained (but not expanded or improved) until such time as agriculture is abandoned.

WETLAND DELINEATION

INTRODUCTION

During initial surveys of the project site, it was obvious that the major drainage that traverses the project site contain wetlands, based upon well-defined and obvious features such as standing or flowing water, mature riparian vegetation, and indication on the USGS map as an intermittent blue line stream. These areas are identified on the vegetation map. Since routine delineations focus on areas that are not necessarily obvious wetlands, this delineation was conducted to establish precise limits of the wetlands on-site.

METHODS

The area was examined to determine wetland limits, and to characterize the site in terms of wetland value. Initial determination of the limits of wetlands was conducted according to the U.S. Army Corps of Engineers (USACE) guidelines set forth in the 1987 Corps of Engineers Wetland Delineation Manual. Munsell soil color charts were used to determine soil chroma and value, and the USFWS National List of Plant Species that Occur in Wetlands: California (Region O) was used to determine the indicator status of plant species. The USACE defines a wetland as "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Typically, USACE wetlands are characterized by the presence of hydrophytic vegetation, hydric soils, and wetland hydrology.

Hydrophytic Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. The governing environmental conditions for hydrophytic vegetation are saturated soils resulting from periodic saturation or inundation by surface or ground water. These periodic events must occur for sufficient duration to result in anaerobic soil conditions. When the dominant species in a plant community are typically adapted for life in anaerobic soil conditions, hydrophytic vegetation is present. The USACE uses the concept of plant communities rather than individual indicator species as criteria for determining a *prevalence* of hydrophytic vegetation in a wetland. The presence of a few individuals of a hydrophytic species in a community dominated by upland species is not a sufficient basis for concluding that an area has hydrophytic vegetation (1987 Corps Manual, Part 3, Section 29). Also, the mere presence of standing water or saturated soil on a site is insufficient evidence that the plant species present are able to tolerate long periods of inundation (Section 35).

The USACE has set forth various categories of plants as indicators to be used, in part, in determining whether or not the prevalence of these species in a plant community constitutes hydrophytic vegetation. These categories include Obligate Wetland Plants (OBL), Facultative Wetland Plants (FACW), Facultative Plants (FAC), Facultative Upland Plants (FACU), and

Obligate Upland Plants (UPL). When more than 50 percent of the dominant species are OBL, FACW, or FAC+, it is an indication that hydrophytic vegetation is present.

Hydric Soils

The hydric soil definition and criteria published in the 1987 Corps Manual have been determined to be obsolete. The current hydric soil definition, criteria, and lists are available over the World Wide Web from the U.S.D.A. Natural Resources Conservation Service (NRCS). For purposes of this investigation, the definition used is that contained in the publication "Field Indicators of Hydric Soils in the United States" (USDA, NCRS 2003). Therein, hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil. Nearly all hydric soils exhibit characteristic morphologies that result from repeated periods of saturation or inundation, or both, for more than a few days. Saturation or inundation when combined with microbial activity in the soil causes a depletion of oxygen. This anaerobiosis promotes biogeochemical processes, such as the accumulation of iron and other reducible elements. These processes also result in characteristic morphologies that persist in the soil during both wet and dry periods, making them particularly useful for identifying hydric soils.

Wetland Hydrology

Wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively. Such characteristics are usually present in areas that are inundated or have soils that are saturated to the surface for sufficient duration to develop hydric soils and support vegetation typically adapted for life in periodically anaerobic soil conditions. Hydrology is often the least exact of the parameters, and indicators of wetland hydrology are sometimes difficult to find in the field. However, it is essential to establish that a wetland area is periodically inundated or has saturated soils during the growing season.

Indicators of wetland hydrology may include, but are not limited to: drainage patterns, drift lines, sediment deposition, watermarks, stream gauge data and flood predictions, historic records, visual observation of saturated soils, and visual observation of inundation. These hydrology indicators are considered to be "primary indicators", any one of which is sufficient evidence that wetland hydrology is present when combined with a hydrophytic plant community and hydric soils. In addition, the following "secondary indicators" may also be used to determine whether wetland hydrology is present. In the absence of a primary indicator, any two secondary indicators must be present to conclude that wetland hydrology is present, *i.e.*: presence of oxidized rhizospheres associated with living plant roots in the upper 12 inches of the soil, presence of water-stained leaves, local soil survey hydrology data for identified soils, or the FAC-neutral test of the vegetation.

The presence of one or two of the wetland components (Hydrophytic Vegetation, Hydric Soils, or Wetland Hydrology) is not sufficient for an area to be classified as a wetland. All three

components must be clearly present for an area to be determined to constitute a jurisdictional wetland.

Waters of the United States

In addition to regulating jurisdictional wetlands, Section 404 of the Clean Water Act (33 U.S.C. 1344) requires authorization for discharges of dredged or fill material into Waters of the United States. For non-tidal Waters of the U.S. the extent of jurisdiction is defined as the Ordinary High Water Mark, which is defined as: "the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural lines impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation or presence of litter and debris."

Thus, an area determined to be a non-wetland may still be under USACE jurisdiction if certain criteria are met. To aid in identifying characteristics of Waters of the U.S., the USACE has prepared guidelines (USACE 2001) and a matrix detailing potential Waters of the U.S. based on apparent flow regimes, geomorphic features, and surface flow indicators. In addition, determination that a wetland or water body is a Waters of the United States also requires that the area in question is subject to interstate commerce. These criteria were considered as they apply to the project site.

County of San Diego Wetlands

The County of San Diego often requires that wetland surveys be completed using the wetlands definition within the County's Resource Protection Ordinance (RPO). This definition includes:

All lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are "wetlands":

- a. At least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places);
- b. The substratum is predominantly undrained hydric soil; or
- c. The substratum is nonsoil and is saturated with water or covered by water at some time during the growing season each year

Other pertinent definitions from the RPO include:

Mature Riparian Woodland - A grouping of sycamores, cottonwoods and/or oak trees having substantial biological value, where at least ten of the trees have a diameter of six inches or greater.

Riparian Habitat - An environment associated with the banks and other land adjacent to freshwater bodies, rivers, streams, creeks, estuaries, and surface-emergent aquifers (such as springs, seeps, and oases). Riparian habitat is characterized by plant and animal communities which require high soil moisture conditions maintained by transported freshwater in excess of that otherwise available through local precipitation.

RESULTS AND CONCLUSIONS

The project site contains wetlands that meet RPO, CDFG, and USACE wetland definitions. The RPO and CDFG wetlands are clearly delineated by the limits of riparian vegetation and habitat as shown on the Vegetation Map. Because USACE wetland limits are more restrictive than the others, and all of the wetlands on-site are being placed into biological open space easements, USACE limits are not a factor in habitat delineation or preservation.

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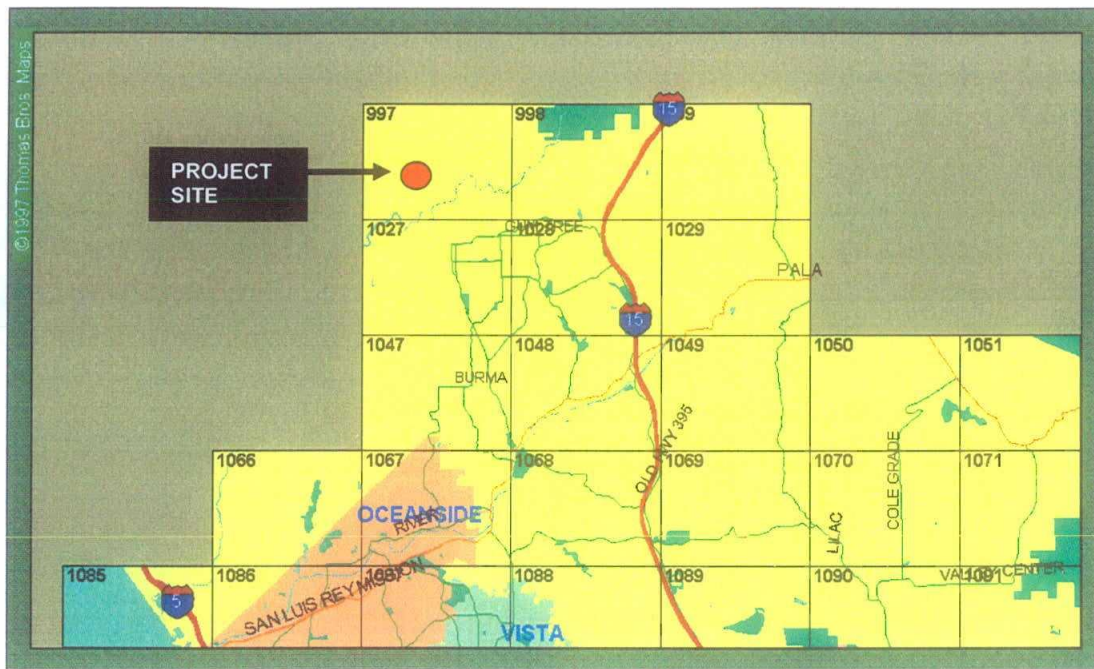


Figure 1. Location of project site in regional context. Thomas Bros. Map page #997, E4.

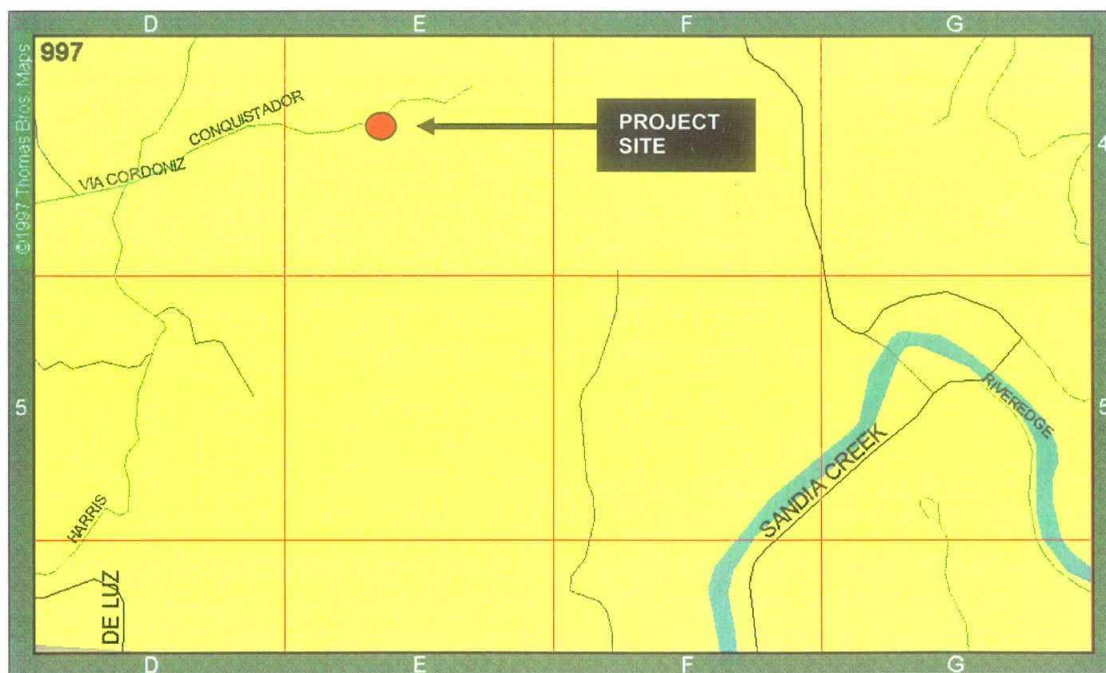


Figure 2. Detail location map of project site. Thomas Bros. Map page #997, E4.

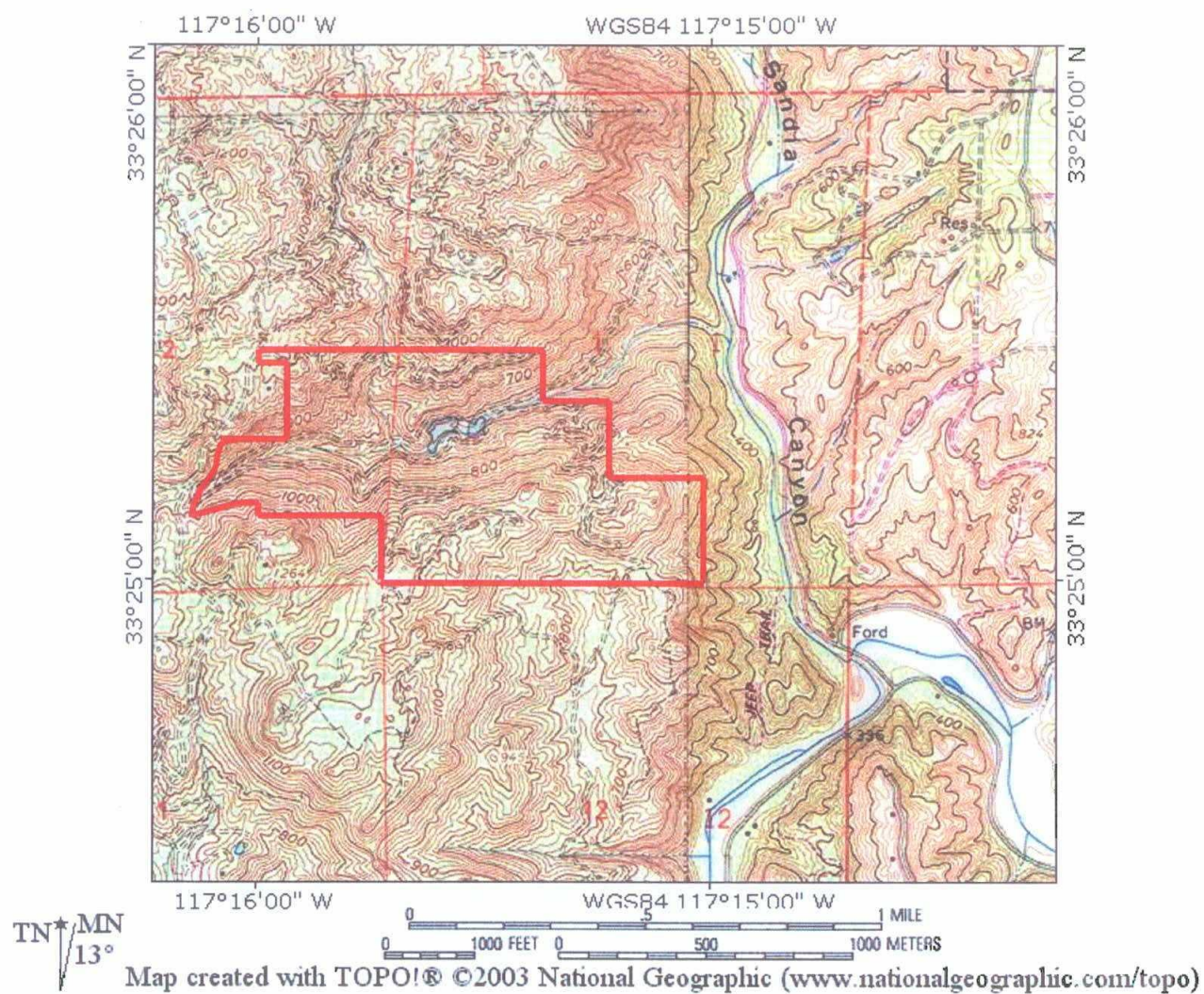


Figure 3. Topographical map showing project site location. Approximate project site boundaries are outlined in red. Taken from USGS Fallbrook and Temecula 7.5 minute series quadrangles.

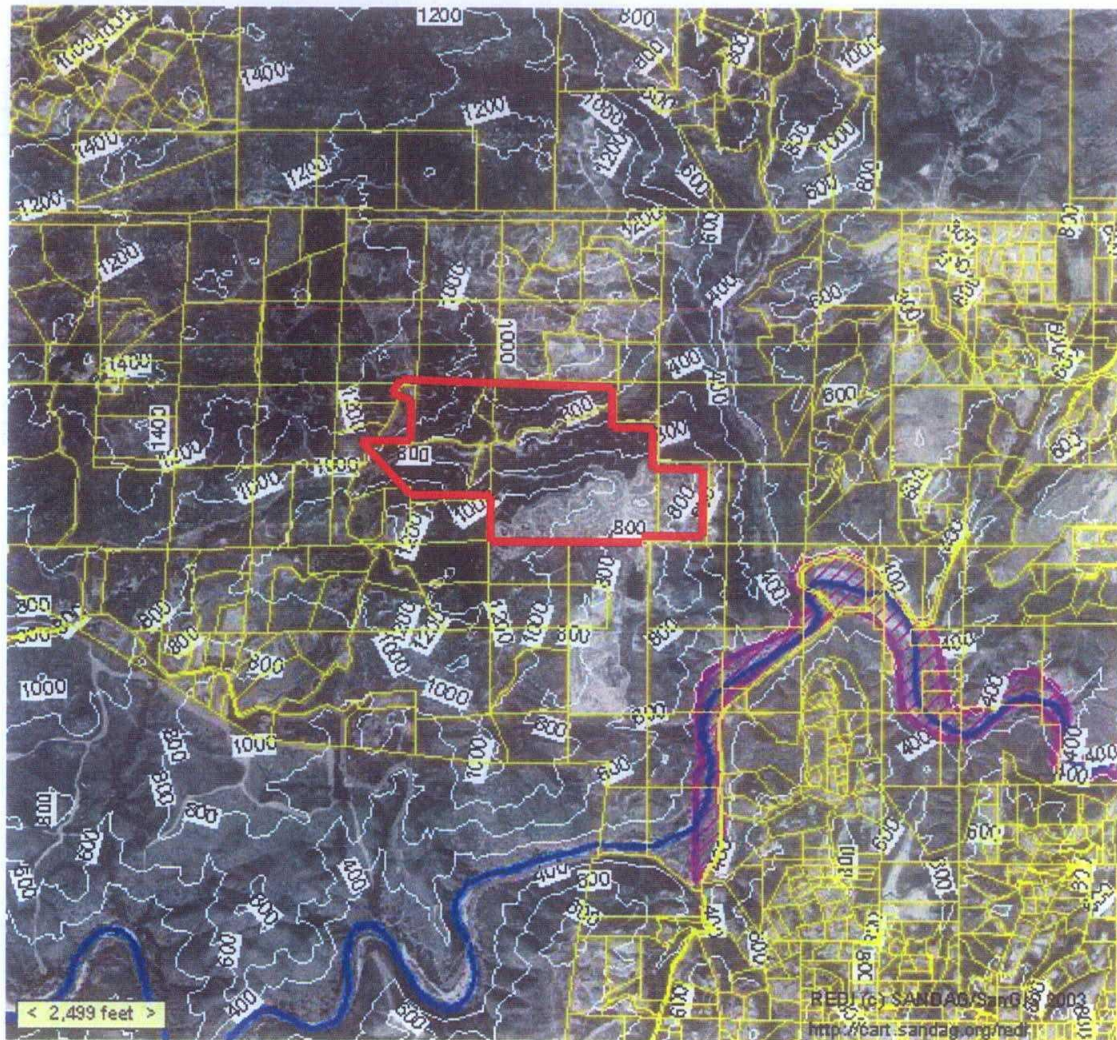


Figure 4. Satellite photograph of project site (photograph by SANDAG/SanGIS 2003), showing approximate parcel boundaries for project site (outlined in red, in center) and adjacent properties in yellow. Blue line is the Santa Margarita River. Top of photo is true north.

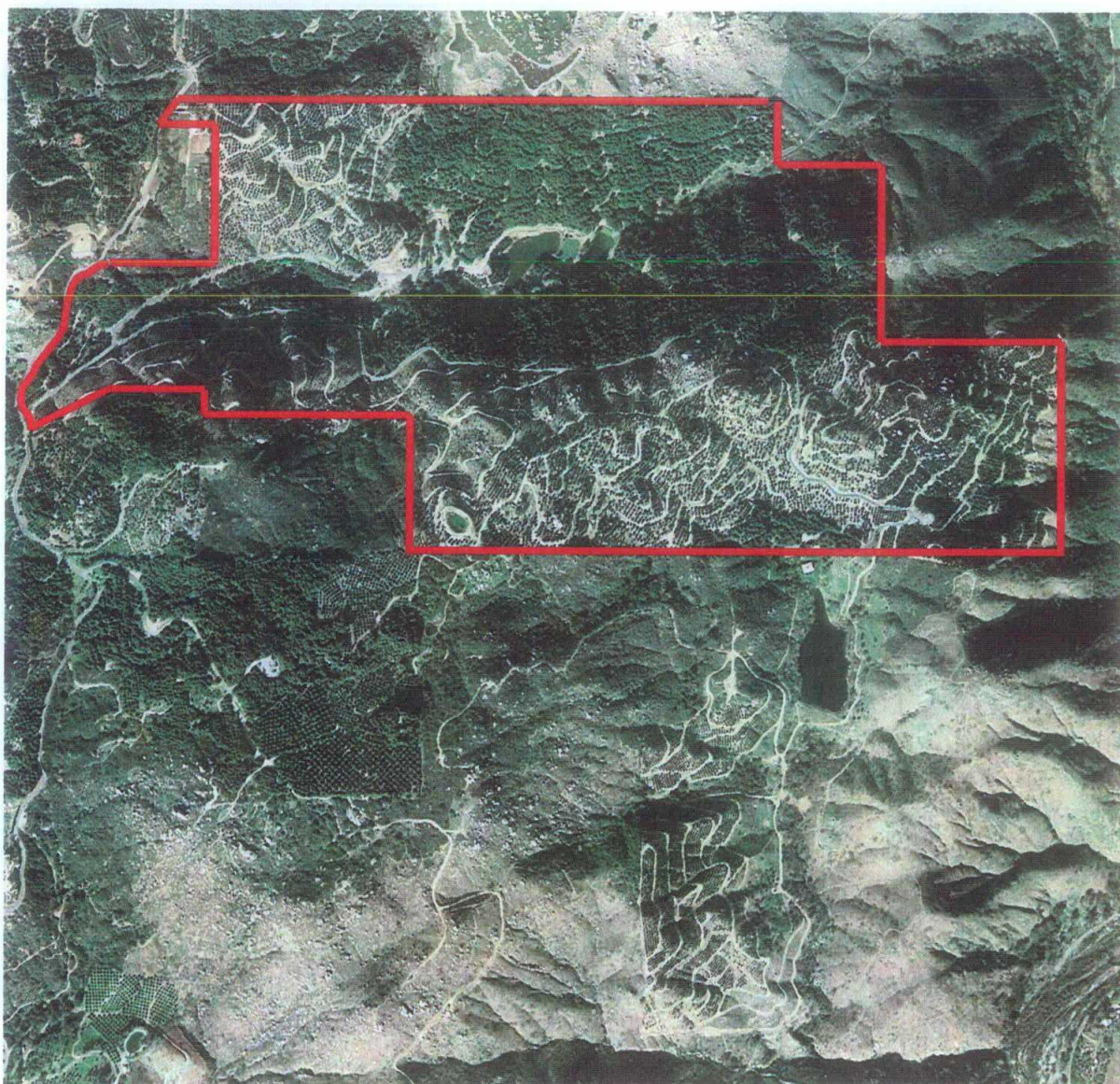


Figure 5. Aerial photograph of the project site (outlined in red). Top of photo is true north.

APPENDIX A

PLANT SPECIES OBSERVED ON THE PROJECT SITE

Note: This list includes species from areas within the previous 350.5 acre project configuration which are no longer proposed for development.

<u>Family</u>	<u>Scientific Name</u>	<u>Common Name</u>
Dicotyledoneae		
Anacardiaceae - Sumac Family		
	<i>Malosma laurina</i>	Laurel Sumac
	<i>Rhus integrifolia</i>	Lemonadeberry
	<i>Schinus terebinthifolius</i>	Brazilian Pepper Tree
	<i>Toxicodendron diversilobum</i>	Poison Oak
Apiaceae (Umbelliferae) - Carrot Family		
	<i>Conium maculatum</i>	Poison Hemlock
	<i>Foeniculum vulgare</i>	Sweet Fennel
	<i>Oenanthe samentosa</i>	Water parsley
Asteraceae (Compositae) - Sunflower Family		
	<i>Achillea millefolium</i> var. <i>pacifica</i>	Yarrow
	<i>Ambrosia confertiflora</i> .	Ragweed
	<i>Ambrosia psilostachya</i>	Western Ragweed
	<i>Artemisia californica</i>	California Sagebrush
	<i>Artemisia douglasiana</i>	California Mugwort
	<i>Baccharis pilularis</i>	Coyote Brush
	<i>Baccharis salicifolia</i>	Mule Fat
	<i>Brickellia californica</i>	Brickellbush
	<i>Cirsium</i> sp.	Thistle
	<i>Conyza bonariensis</i>	Conyza
	<i>Conyza canadensis</i>	Horseweed
	<i>Dimorphotheca</i> sp.	African Daisy
	<i>Eriophyllum confertiflorum</i>	Flat-topped Golden Yarrow
	<i>Gnaphalium bicolor</i>	Cudweed
	<i>Gnaphalium californicum</i>	California Everlasting

Hazardia squarrosa var. *grindelioides*
Heterotheca grandiflora

Saw-toothed Goldenbush
Telegraph Weed

Sonchus asper
Sonchus oleraceus
Xanthium strumarium var. *canadense*

Prickly Sow Thistle
Sow Thistle
Cocklebur

Boraginaceae - Borage Family

Plagiobothrys sp.

Popcorn Flower

Brassicaceae (Cruciferae) - Mustard Family

Brassica sp.
Brassica nigra
Raphanus sativus

Mustard
Black Mustard
Wild Radish

Caprifoliaceae - Honeysuckle Family

Lonicera subspicata
Sambucus mexicana

Honeysuckle
Elderberry

Chenopodiaceae - Goosefoot Family

Atriplex semibaccata
Chenopodium sp.
Chenopodium californicum
Salsola tragus

Australian Saltbush
Pigweed
California Pigweed
Russian Thistle

Cistaceae - Rock-Rose Family

Helianthemum scoparium var. *aldersonii*

Alderson's Rush-rose

Convolvulaceae- Morning Glory Family

Calystegia macrostegia

Morning-glory

Cucurbitaceae - Gourd Family

Marah macrocarpus

Wild Cucumber

Cuscutaceae - Dodder Family

Cuscuta sp.

Witch's Hair, Dodder

Euphorbiaceae -Spurge Family

Chamaesyce albomarginata

Rattlesnake weed

Fabaceae (Leguminosae) - Pea Family

*Lathyrus splendens**Lotus heermannii**Lotus scoparius* ssp. *scoparius**Melilotus* sp.

Pride-of-California

Heermann's Lotus

Deerweed

Sweet-clover

Fagaceae - Oak Family

Quercus agrifolia var. *agrifolia**Quercus berberidifolia*

Coast Live Oak

Scrub Oak

Geraniaceae - Geranium Family

Erodium cicutarium

Red-stem Filaree

Grossulariaceae - Gooseberry Family

Ribes indecorum

White-flowered Currant

Hydrophyllaceae - Waterleaf Family

Phacelia sp.*Phacelia parryi*

California Blue Bells

Parry Phacelia

Lamiaceae (Labiatae) - Mint Family

*Mentha spicata**Salvia apiana**Salvia columbariae* var. *columbariae*

Spearmint

White Sage

Chia

Malvaceae - Mallow Family

Malacothamnus sp.*Malva parviflora**Sphaeralcea* sp.

Bush Mallow

Cheeseweed

Apricot Mallow

Nyctaginaceae - Four O'Clock Family

Mirabilis californica var. *californica*

Wishbone Bush

Onagraceae - Evening Primrose Family

Epilobium ciliatum ssp. *ciliatum*

Willow Herb

Oxalidaceae - Wood Sorrel Family

Oxalis pes-caprae

Bermuda Buttercup

Paeoniaceae - Peony Family

Paeonia californica

Wild Peony

Papaveraceae - Poppy Family

Eschscholzia californica

California Poppy

Papaver sp.

Poppy

Platanaceae - Plane Tree Family

Platanus racemosa

Western Sycamore

Polygonaceae - Buckwheat Family

Eriogonum fasciculatum ssp. *fasciculatum*

California Buckwheat

Rumex sp.

Dock

Portulacaceae - Purslane Family

Claytonia perfoliata var. *perfoliata*

Miner's Lettuce

Primulaceae - Primrose Family

Anagallis arvensis

Scarlet Pimpernel

Rhamnaceae - Buckthorn Family

Ceanothus crassifolius

Hoaryleaf Ceanothus

Ceanothus leucodermis

Whitebark Ceanothus

Rosaceae - Rose Family

Adenostoma fasciculatum

Chamise

Prunus ilicifolia

Holly-leaved Cherry

Rosa californica

California Wild Rose

Rubus ursinus

California Blackberry

Rubiaceae - Madder Family

Galium angustifolium

Narrowleaf Bedstraw

Salicaceae - Willow Family

Populus fremontii

Fremont Cottonwood

Salix gooddingii var. *gooddingii*

Black Willow

Salix lasiolepis

Arroyo Willow

Scrophulariaceae-Figwort Family

Keckiella cordifolia
Mimulus aurantiacus
Scrophularia californica
var. *floribunda*

Heart-leaved Penstemon
Red Bush Monkey-flower
Coast Figwort, Bee Plant

Solanaceae - Nightshade Family

Nicotiana glauca
Solanum sp.
Solanum americanum
Solanum xanti

Tree Tobacco
Nightshade
White Nightshade
Purple Nightshade

Tamaricaceae -Tamarisk Family

Tamarix sp.

Tamarisk

Urticaceae - Nettle Family

Urtica dioica ssp. *holosericea*

Stinging Nettle

Monocotyledoneae

Agavaceae - Agave Family

Yucca whipplei ssp. *whipplei*

Our Lord's Candle

Amaryllidaceae - Amaryllis Family

Dichelostemma capitatum

Blue Dicks, Wild Hyacinth

Cyperaceae - Sedge Family

Cyperus involucratus
Cyperus strigosus
Scirpus californicus

Umbrella Plant
False Nut Sedge
California Bulrush

Juncaceae - Rush Family

Juncus sp.
Juncus mexicanus

Rush
Mexican Rush

Liliaceae - Lily Family

Chlorogalum pomeridianum

Soap Plant, Amole

Poaceae (Gramineae) - Grass Family

Avena sp.

Wild Oats

Avena barbata

Slender Wild Oat

Bromus carinatus

California Brome

Bromus diandrus

Ripgut Grass

Bromus hordeaceus

Soft Chess

Bromus madritensis ssp. *rubens*

Red Brome

Cortaderia sp.

Pampas Grass

Hordeum sp.

Wild Barley

Melica imperfecta

California Melic

Nasella sp.

Needle Grass

Pennisetum setaceum

Fountain Grass

Phragmites australis

Common Reed

Polypogon monspeliensis

Rabbitfoot Grass

Rhynchelytrum repens

Natal Grass

Typhaceae - Cattail Family

Typha latifolia

Soft-flag, Tall Cattail

APPENDIX B

WILDLIFE SPECIES OBSERVED OR DETECTED
ON THE PROJECT SITE

Note: This list includes species from areas within the previous 350.5 acre project configuration which are no longer proposed for development.

BIRDS

Red-shouldered Hawk	<i>Buteo lineatus</i>
Turkey Vulture	<i>Cathartes aura</i>
American Wigeon	<i>Anas americana</i>
Ruddy Duck	<i>Oxyura jamaicensis</i>
Mallard	<i>Anas platyrhynchos</i>
Lesser Scaup	<i>Aythya affinis</i>
Mourning Dove	<i>Zenaida macroura</i>
Common Ground Dove	<i>Columbina passerina</i>
White-throated Swift	<i>Aeronautes saxatalis</i>
Anna's Hummingbird	<i>Calypte anna</i>
Ring-necked Pheasant*	<i>Phasianus colchicus</i>
Common Peafowl*	<i>Pavo cristatus</i>
California Quail	<i>Callipepla californica</i>
American Coot	<i>Fulica americana</i>
Nuttall's Woodpecker	<i>Picoides nuttallii</i>
Western Scrub-Jay	<i>Aphelocoma californica</i>
American Crow	<i>Corvus brachyrhynchos</i>
Common Raven	<i>Corvus corax</i>
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Bushtit	<i>Psaltiriparus minimus</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>
Wrentit	<i>Chamaea fasciata</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Spotted Towhee	<i>Pipilo maculatus</i>
California Towhee	<i>Pipilo crissalis</i>
Dark-eyed Junco	<i>Junco hyemalis</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Song Sparrow	<i>Melospiza melodia</i>
Lesser Goldfinch	<i>Carduelis psaltria</i>
House Finch	<i>Carpodacus mexicanus</i>

MAMMALS

Brush Rabbit <i>Sylvilagus bachmani cinerascens</i>	Scats
Black Rat* <i>Rattus rattus</i>	Scats and foraging evidence
California Ground Squirrel <i>Spermophilus beecheyi</i>	Observed
Coyote <i>Canis latrans</i>	Observed and scats
Raccoon <i>Procyon lotor</i>	Tracks

AMPHIBIANS AND REPTILES

Pacific Treefrog <i>Hyla regilla</i>
Granite Spiny Lizard <i>Sceloporus orcutti</i>
Western Fence Lizard <i>Sceloporus occidentalis</i>
Side-blotched Lizard <i>Uta stansburiana</i>

* = non-native or naturalized species

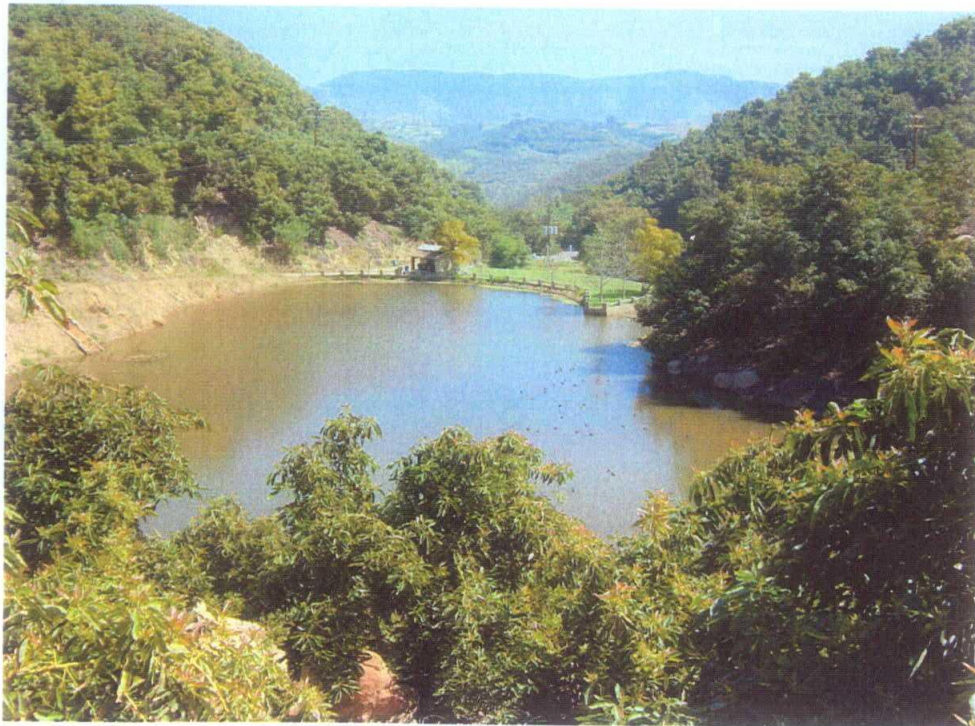
APPENDIX C

PHOTOGRAPHS OF THE PROJECT SITE

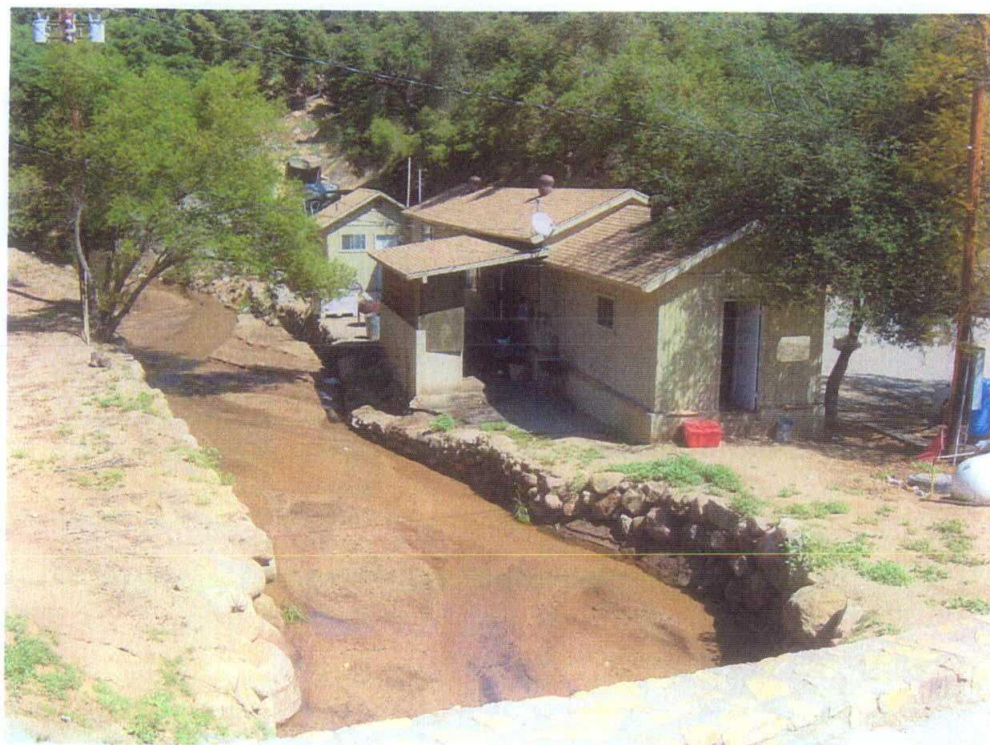
All photographs taken 2003, 2004, and 2008 by W.T. Everett



Photograph 1. View looking down into the main west/east drainage on the project site. Artificial water impoundments and associated facilities can be seen.



Photograph 2. Alternate view of water impoundment in the main west/east drainage.



Photograph 3. View of farm operations buildings in north-central portion of the project site.



Photograph 4. View of small water impoundment in western portion of the project site.



Photograph 5. View of the project site from the north boundary looking south.



Photograph 6. Fence at upper end of east/west drainage that transects the northern portion of the project site. This fence effectively prevents passage of wildlife.

APPENDIX D

COUNTY LIST OF SENSITIVE SPECIES WITH POTENTIAL TO OCCUR
ON THE PROJECT SITELegend**Status**

- 1 = Federally Endangered
 2 = Federally Threatened
 3 = State Endangered
 4 = State Threatened
 5 = State Rare
 6 = MSCP Narrow Endemic
 7 = Not Listed
 Ext = Extirpated

Potential to Occur On-site

- L = Low
 M = Moderate
 H = High
 U = Unknown (Sufficient data are not available on the status, distribution, abundance, or natural history of the species to make a reliable determination of the probability of occurring on-site.)

Common Name	Scientific Name	Status	Observed On-Site (Y or N)	Potential to Occur On-site	Habitat Preferences
Orcutt's brodiaea	<i>Brodiaea orcuttii</i>	7	N	L	Grassland, Riparian, Oak Woodland, Chamise Chaparral, Vernal Pools
California black walnut	<i>Juglans californica</i>	7	N	L	Riparian
Arroyo chub	<i>Gila orcutti</i>	7	N	L	Riparian

San Diego horned lizard	<i>Phrynosoma coronatum blainvillei</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Chamise Chaparral, Mixed Conifer
Coastal western whiptail	<i>Cnemidophorus tigris multiscutatis</i>	7	N	L	Mixed Chaparral, Riparian, Oak Woodland, Chamise Chaparral
San Diego banded gecko	<i>Coleonyx variegatus abbottii</i>	7	N	L	Coastal Sage Scrub, Grassland, Chamise Chaparral
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest
South Coast garter snake	<i>Thamnophis sirtalis ssp. Novum</i>	7	N	M	Riparian, Freshwater Marsh
Two stripe garter snake	<i>Thamnophis hammondi</i>	7	N	L	Riparian, Freshwater Marsh
Coast patch-nosed snake	<i>Salvadora hexalepis virgulata</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Chamise Chaparral, Freshwater Marsh
Northern red diamond rattlesnake	<i>Crotalus ruber ruber</i>	7	N	M	Coastal Sage Scrub, Mixed Chaparral, Chamise Chaparral, Pinon Juniper, Desert Scrub
Arroyo toad	<i>Bufo microscaphus californicus</i>	1, 6	N	L	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Montane Meadow

Yuma myotis	<i>Myotis yumanensis</i>	7	N	U	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Freshwater Marsh, Salt or Alkali Marsh, Vernal Pools, Montane Meadow, Lakes and Bays
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	7	N	L	Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow
Pallid bat	<i>Antrozous pallidus</i>	7	N	U	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow
Small-footed myotis	<i>Myotis ciliolabrum</i>	7	N	L	Mixed Chaparral, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Wash, Montane Meadow
California leaf-nosed bat	<i>Macrotus californicus</i>	7	N	U	Coastal Sage Scrub, Mixed Chaparral, Riparian, Desert Scrub, Desert Wash

Western red bat	<i>Lasiurus blossevillii</i>	7	N	U	Riparian, Oak Woodland, Mixed Conifer, Closed Cone Forest, Montane Meadow
Pocketed free- tailed bat	<i>Nyctinomops femorosaccus</i>	7	N	U	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Freshwater Marsh, Desert Scrub, Desert Wash, Salt or Alkali Marsh, Vernal Pools, Montane Meadow, Lakes and Bays
Big free-tailed bat	<i>Nyctinomops macrotis</i>	7	N	U	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Freshwater Marsh, Desert Scrub, Desert Wash, Salt or Alkali Marsh, Vernal Pools, Montane Meadow, Lakes and Bays

Greater western mastiff bat	<i>Eumops perotis californicus</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Freshwater Marsh, Desert Scrub, Desert Wash, Salt or Alkali Marsh, Vernal Pools, Montane Meadow, Lakes and Bays
San Diego black-tailed jackrabbit	<i>Lepus californicus bennettii</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Grassland, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest
American badger	<i>Taxidea taxus</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Grassland, Oak Woodland, Chamise Chaparral, Mixed Conifer, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow
Mountain lion	<i>Felis concolor</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow

Southern mule deer	<i>Odocoileus hemionus</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	7	N	L	Coastal Sage Scrub, Riparian, Oak Woodland, Chamise Chaparral
Southern grasshopper mouse	<i>Onychomys torridus Ramona</i>	7	N	L	Coastal Sage Scrub, Mixed Chaparral, Grassland, Chamise Chaparral
Stephen's kangaroo rat	<i>Dipodomys stephensi</i>	1, 4	N	L	Coastal Sage Scrub, Grassland
Red-shouldered hawk	<i>Buteo lineatus</i>	7	Y	H	Riparian, Oak Woodland
Cooper's hawk	<i>Accipiter cooperi</i>	7	N	H	Grassland, Riparian, Oak Woodland
Sharp-shinned hawk	<i>Accipiter striatus</i>	7	N	M	Coastal Sage Scrub, Oak Woodland, Mixed Conifer
Golden eagle	<i>Aquila chrysaetos</i>	6	N	L	Coastal Sage Scrub, Mixed Chaparral, Grassland, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper
Turkey vulture	<i>Cathartes aura</i>	7	Y	H	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest
Common barn-owl	<i>Tyto alba</i>	7	N	M	Riparian, Oak Woodland

Loggerhead shrike	<i>Lanius ludovicianus</i>	7	N	L	Coastal Sage Scrub, Grassland, Riparian, Oak Woodland, Desert Scrub, Desert Wash
California Gnatcatcher	<i>Polioptila californica californica</i>	2	N	L	Coastal Sage Scrub
Western bluebird	<i>Sialia mexicana</i>	7	N	L	Riparian, Oak Woodland
Least Bell's vireo	<i>Vireo bellii pusillus</i>	1, 3	N	L	Riparian
Southwestern willow flycatcher	<i>Empidonax trailii extimus</i>	1	N	L	Riparian

APPENDIX E**DETAILS OF SITE VISITS**

DATE	TIMES	CONDITIONS	COMMENTS
03/25/2003	0830-1630	High clouds Temps mid 70s No wind Unlimited visibility	Initial Data Collection
04/11/2003	0830-1530	High clouds Temps mid 60s No wind Unlimited visibility	Initial Data Collection Focused Surveys
04/11/2003	2145-2345	High Clouds Temps 59-62 No wind	Focused Surveys
04/30/2003	0630-1445	Low clouds Temps mid 60s Light wind Unlimited visibility	Vegetation Mapping Focused Surveys
04/30/2003	2130-2330	Low clouds Temps 60-62 Light wind	Focused Surveys
05/15/2003	0615-1400	No clouds Temps low 80s No wind Unlimited visibility	Mapping Verification Focused Surveys
05/15/2003	2130-2330	No clouds Temps 67-70 No wind	Focused Surveys
5/23/2003	0630-1245	Low Clouds Temps mid 60s Light wind Unlimited visibility	Focused Surveys
5/23/2003	2200-0000	Low Clouds Temps 59-62 Light wind	Focused Surveys
6/02/2003	0830-1230	Partly sunny Temps mid 60s Light wind Unlimited visibility	Focused Surveys

DATE	TIMES	CONDITIONS	COMMENTS
6/02/2003	2200-0000	Low clouds Temps 58-60 Light wind	Focused Surveys
6/09/2003	0630-1030	No clouds Temps mid 60s Light wind Unlimited visibility	Focused Surveys
6/09/2003	2200-0000	No clouds Temps 60-62 Light wind	Focused Surveys
6/17/2003	0800-1000	No clouds Temps mid 60s Light wind Unlimited visibility	Focused Surveys
6/24/2003	0615-0930	No clouds Temps mid 60s Light wind Unlimited visibility	Focused Surveys
7/07/2003	0600-0800	No clouds Temps 61-63 Light wind Unlimited Visibility	Focused Surveys
7/14/2003	0615-0800	No clouds Temps low 60s No wind Unlimited Visibility	Focused Surveys
4/13/2004	0930-1400	No clouds Temps mid 60s Light wind Unlimited visibility	Wetland Delineation
9/29/2004	0945-1415	100% cloud cover Temps mid 60s Wind 0-3 Unlimited visibility	Review vegetation mapping with Maggie Loy, DPLU
11/10/2004	0914-1530	No clouds Temps mid 60s No wind Unlimited Visibility	Revise vegetation mapping
02/22/08	1000-1130	N/A	Site visit w/County Staff

APPENDIX F

RESULTS OF FOCUSED SURVEYS FOR SENSITIVE SPECIES

Introduction

The County scoping letter of June 12, 2002 required that focused surveys be conducted on the project site for sensitive plants and several sensitive animal species. Discussion of these results are included in the appropriate sections of the main report. The following are summary details of these focused surveys:

Sensitive Plants

Focused Spring surveys were conducted for sensitive plant species on April 11 & 30, and May 23, 2003. Special attention was given to searching for species with a medium to high probability of occurring on the project site, based on CNDDDB records, CNPS data, the County of San Diego Species Matrix, federal and state listings, soils, and site conditions. During the focused surveys, all areas on the project site with appropriate habitat for sensitive plant species were surveyed.

Only two sensitive plant species were considered possible to occur on-site. These were the California black walnut *Juglans californica* and Orcutt's brodiaea *Brodiaea orcutti*. California black walnut is a conspicuous tree species that would have been detected had it occurred on the site. Orcutt's brodiaea is typically found in clay soil on serpentine substrate under vernal-flooded conditions in meadows and vernal-pool habitats. Although no vernal pools or vernal-flooded conditions occur on the project site, the Gavilan Mountain fire created conditions where the species might possibly have occurred outside of typical habitat.

Neither of these plant species, nor any other sensitive plants species, was detected during the focused surveys. No sensitive plant species are considered likely to occur on the site. A complete list of plant species observed is presented in Appendix A.

Coastal California Gnatcatcher

On the project site, CSS habitat occurs only in two small patches (See Vegetation Map). However, California Gnatcatchers *Poliophtila californica* are known to occur in a variety of habitats in addition to CSS. These include chaparral, grassland, and riparian plant communities where they occur adjacent to or intermixed with CSS. Thus, in addition to the CSS areas, focused surveys for this species were conducted within Scrub Oak Chaparral and adjacent riparian habitats throughout the project site.

The site was surveyed three times in conformance with current presence/absence USFWS protocol guidelines. The surveys were conducted by slowly walking routes within and adjacent to the project site (See Survey Route Map). After stopping, listening, and observing at intervals of approximately 50 meters, taped Coastal California Gnatcatcher vocalizations were played for 30 seconds. After the vocalizations were played, an additional two minutes were spent observing and listening before moving to the next observation site. Weather conditions and time of day were appropriate for the detection of Coastal California Gnatcatchers (Table 1).

TABLE 1
SCHEDULE OF CALIFORNIA GNATCATCHER SURVEYS AND CONDITIONS

Date	Time (hours)	Temperature (°F)	Wind Speed (mph)	Cloud Cover (%)
4/30/03	0830-1030	64-68	0-3	20
5/15/03	0900-1100	72-76	0	0
5/23/03	0900-1045	63-68	0-5	40

No Coastal California Gnatcatchers were detected on-site or adjacent to the site during the focused surveys. The site does not generally have the structural or floristic characteristics typical of habitats and sites occupied by Coastal California Gnatcatchers. Some adjacent land uses (agricultural) probably limit the site's attractiveness to the species.

Least Bell's Vireo

Least Bell's Vireos *Vireo belli pusillus* occur and breed in well-developed, mature willow-dominated riparian habitat with dense native understory. Ideal habitat for this species does not occur on the project site. Nevertheless, focused protocol surveys were conducted in all riparian habitat.

The site was surveyed eight times in conformance with current presence/absence USFWS protocol guidelines. The surveys were conducted by slowly walking routes within and adjacent to the project site (See Survey Route Map), listening for songs, whisper songs, scolds, and observing. No taped vireo vocalizations were played during the surveys. Weather conditions and time of day were appropriate for the detection of Least Bell's Vireos (Table 2).

TABLE 2
SCHEDULE OF LEAST BELL'S VIREO SURVEYS AND CONDITIONS

Date	Time (hours)	Temperature (°F)	Wind Speed (mph)	Cloud Cover (%)
4/11/03	0830-1030	64-68	0-3	30
4/30/03	0630-0830	60-64	0	0
5/15/03	0615-0830	63-68	0-5	40
5/23/03	0630-0830	58-61	0	100
6/02/03	0830-1030	63-64	0-4	60

6/09/03	0630-0830	60-63	0-3	0
6/17/03	0800-1000	62-64	0	0
6/24/03	0615-0930	60-63	0-4	0

No Least Bell's Vireos were detected on-site or adjacent to the site during the focused surveys, and none are considered likely to occur. Riparian habitat on the site does not generally have the structural or floristic characteristics typical of habitats and sites occupied by this species.

Southwestern Willow Flycatcher

Almost all Southwestern Willow Flycatcher *Empidonax traillii extimus* breeding habitats are within close proximity (less than 20 yards) of water or very saturated soil. This water may be in the form of large rivers, smaller streams, springs, or marshes. At some sites, surface water is present early in the nesting season, but gradually dries up as the season progresses. Ultimately, the breeding site must have a water table high enough to support riparian vegetation. At the project site, the riparian vegetation lacks the dense lower, middle, and canopy vegetation cover that the species requires. Nevertheless, focused surveys were conducted for this species within all riparian habitat areas on the project site.

The site was surveyed five times in conformance with current presence/absence USFWS protocol guidelines. The surveys were conducted by slowly walking routes within and adjacent to the project site (See Survey Route Map). Weather conditions and time of day were appropriate for the detection of Southwestern Willow Flycatchers (Table 3).

TABLE 3
SCHEDULE OF SOUTHWESTERN WILLOW FLYCATCHER
SURVEYS AND CONDITIONS

Date	Time (hours)	Temperature (°F)	Wind Speed (mph)	Cloud Cover (%)
5/23/03	0630-0830	58-61	0	100
6/09/03	0630-0830	60-63	0-3	0
6/24/03	0615-0930	60-63	0-4	0
7/07/03	0600-0800	61-63	0-3	0
7/14/03	0615-0800	60-62	0	0

No Southwestern Willow Flycatchers were detected on-site or adjacent to the site during the focused surveys, and none are considered likely to occur. Riparian habitat on the site does not generally have the structural or floristic characteristics typical of habitats and sites occupied by this species.

Arroyo Southwestern Toad

The arroyo toad *Bufo microscaphus californicus* is restricted to rivers that have shallow, gravelly pools adjacent to sandy terraces. Eggs are deposited and larvae develop in shallow pools with minimal current and little or no emergent vegetation and with sand or pea gravel substrate overlain with flocculent silt. Juveniles and adults forage for insects on sandy stream terraces that have nearly complete closure of cottonwoods (*Populus* spp.), oaks (*Quercus* spp.), or willows (*Salix* spp.), and almost no grass and herbaceous cover at ground level.

Although potential toad breeding habitat is minimal, the site was surveyed six times in conformance with current presence/absence USFWS protocol guidelines. This includes daytime surveys where assessments were made regarding habitat suitability, and nighttime surveys to listen for toad vocalizations. During the daytime, the survey route was slowly walked (See Survey Route Map) and visual searches were made along stream margins and adjacent habitat. Extreme care was taken not to disturb habitat that could have potentially held adults, eggs, larvae, or juveniles. At night, the survey route was walked with periodic 15 minute stops to listen for vocalizations. The same cautions were used to avoid disturbance. At night, surveys were conducted later than one hour after dusk when the temperature was at or above 55 degrees. Use of lights was minimized.

TABLE 4
SCHEDULE OF ARROYO TOAD SURVEYS AND CONDITIONS

Date	Time (hours)	Temperature (°F)	Wind Speed (mph)	Cloud Cover (%)
4/11/03	1030-1230	64-68	0	30
	2145-2345	59-62	0	40
4/30/03	1030-1230	60-64	0	0
	2130-2330	60-62	0-4	100
5/15/03	1100-1300	68-74	0-5	40
	2130-2330	67-70	0	0
5/23/03	1045-1245	58-61	0	100
	2200-0000	59-62	0-4	100
6/02/03	1030-1230	63-64	0-4	60
	2200-000	58-60	0-4	100
6/09/03	0830-1030	60-63	0-3	0
	2200-0000	60-62	0-3	0

No arroyo toads were detected on-site or adjacent to the site during the focused surveys, and none are considered likely to occur. Riparian habitat on the site does not generally have the habitat characteristics preferred for breeding by this species. Although no toads were detected on the site, the possibility cannot be ruled out that grove/upland areas could be occasionally used by arroyo toads.

APPENDIX G

PREPARER QUALIFICATIONS

William T. Everett is a research, consulting, and conservation biologist with more than 35 years experience in the San Diego environment and around the world. He has logged more than 14,000 hours of field work, all detailed with field notes. In the 1970's Bill apprenticed in the study of chaparral ecology under Frank Gander, the retired but renown premier California botanist of the 1930s and 40s. Although his specialty is ornithology, Bill has a long-standing interest in all endangered species management and conservation issues. As President then Conservation Chairman of the San Diego Chapter of the Audubon Society in the late 1970s, he gained a keen understanding of the conservation challenges facing a growing Southern California. He subsequently became one of the first Biological Consultants certified by the County of San Diego in the 1980s. Bill is a Fellow of the National Association of Environmental Professionals (NAEP) and subscribes to the NAEP Code of Ethics and Standards of Practice for Environmental Professionals.

Bill Everett has published numerous scientific articles and conducted research in Southern California, Alaska, Antarctica, Baja California, South America, and throughout the tropical Pacific Ocean. In 1977, in recognition of his accomplishments, he was appointed as a Research Associate of the Department of Birds and Mammals of the San Diego Natural History Museum, a position he holds to this day. In 1990 he was elected as a Research Fellow of the Zoological Society of San Diego, and in 1988 was appointed as the Senior Conservation Biologist of the Western Foundation of Vertebrate Zoology. The Royal Geographic Society of London elected Bill as a Fellow in 1996, following his election as a Fellow of the Explorers Club in 1990.

Hired as a biologist for the U.S. Fish and Wildlife Service in 1977, Bill conducted research on endangered Peregrine Falcons in Northern California at a time when their continued existence was questionable. His interest in threatened species led to publication by the Audubon Society in 1979 of his paper entitled "Threatened, Declining and Sensitive Bird Species in San Diego County" (Sketches 36:1-2). This paper contained the first published account of the decline of the California Gnatcatcher.

Beyond the Southern California area, Bill has prepared the seabird impacts sections for the Draft and Final Environmental Impact Statements for Hawaii-based Pelagic Fisheries of the Western Tropical Pacific Ocean (2001), received a National Science Foundation major grant to lead an International Biocomplexity Survey and Expedition to Isla Guadalupe, Baja California, Mexico (2000), led the effort to save North America's most endangered bird species, the San Clemente Loggerhead Shrike (1991-1997), and currently heads up efforts to restore bird populations on Wake Atoll and Christmas Island in the central Pacific.

Bill holds a U.S. Fish and Wildlife Master Bird Banding Permit (#22378) with Endangered Species Authorization, and California Gnatcatcher Survey Authorization Permit # TE-788036. He received his Masters Degree from the University of San Diego in 1991, and completed a Post-Graduate Program at Harvard University's John F. Kennedy School of Government in 1997.

Bill served as a member of the Conservation and Research Committee of the Zoological Society of San Diego since the committee was first established. In 1990, he founded the Endangered Species Recovery Council (www.esrc.org), an international organization of scientists and conservationists dedicated to finding solutions to the problem of species extinctions. He continues as President of the organization.

In May 2002 Bill was honored in New York as a first recipient of the Explorers Club "Champions of Wildlife" award.

Susan Rutherford Scatolini has over thirteen years of experience in research, monitoring, mitigation and assessing impacts in wetlands, freshwater and riparian habitats, and terrestrial habitats. Her responsibilities include conducting field surveys, wetland delineations, data collection, and wetland restoration. She has successfully completed the Wetland Institute's 40-hour course on Basic Wetland Delineation and The Romberg Tiburon Centers Advanced Wetland Delineation Methods course. She has performed delineations in California, Hawaii, Pennsylvania, and Guam in a wide variety of soils, vegetation, and habitats. Ms. Scatolini specializes in ecological analysis of wetlands.

Sue received her M.S. (Emphasis in Ecology) from San Diego State University in 1989, and her B.A. in Aquatic Biology (with honors) from the University of California, Santa Barbara in 1987.

Sue is currently also working as the District Biologist for CALTRANS.

APPENDIX H

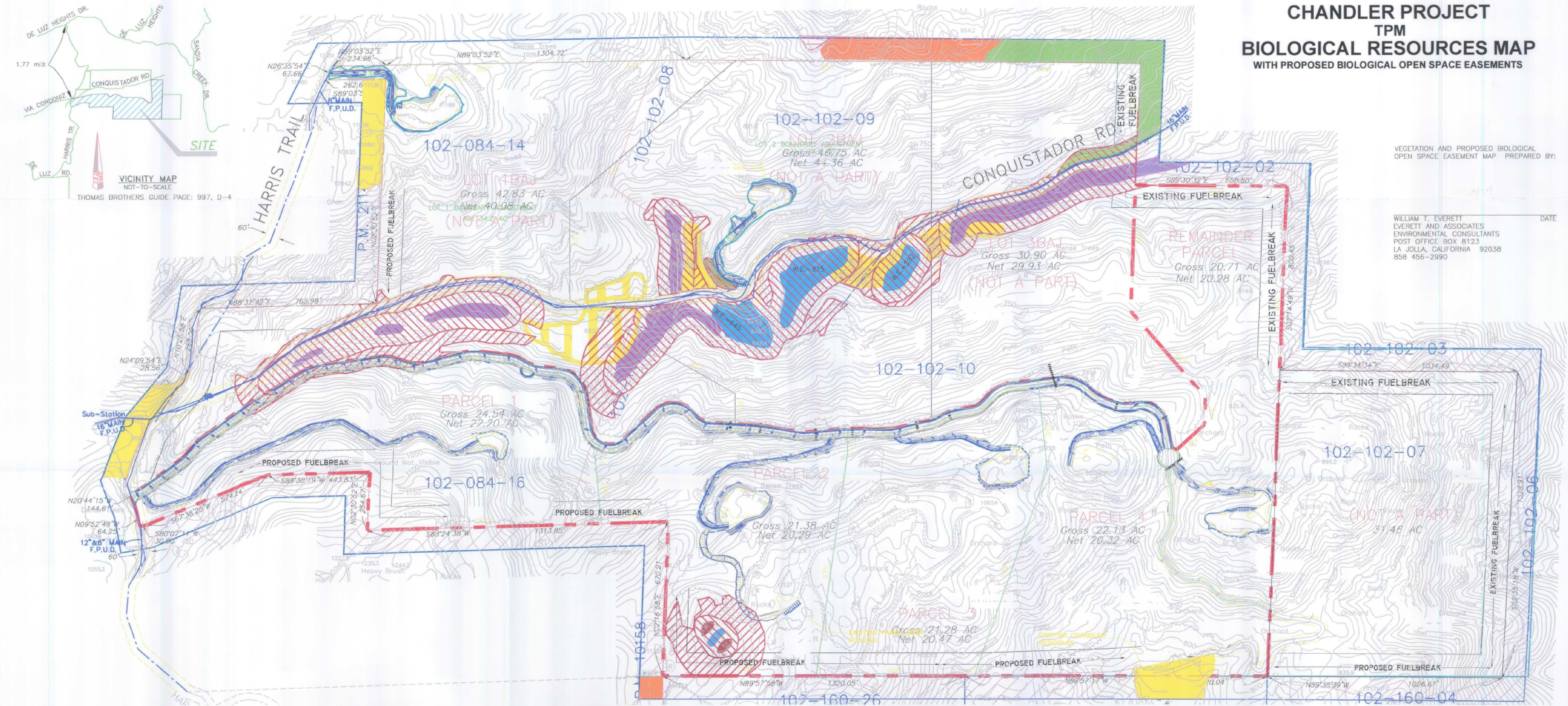
**BIOLOGICAL RESOURCES MAP AND
OPEN SPACE EXHIBIT**


CHANDLER PROJECT TPM BIOLOGICAL RESOURCES MAP WITH PROPOSED BIOLOGICAL OPEN SPACE EASEMENTS

VEGETATION AND PROPOSED BIOLOGICAL
OPEN SPACE EASEMENT MAP PREPARED BY:

WILLIAM T. EVERETT
EVERETT AND ASSOCIATES
ENVIRONMENTAL CONSULTANTS
POST OFFICE BOX 8123
LA JOLLA, CALIFORNIA 92038
858 456-2990

DATE





1.77 mile

DE LUZ HEIGHTS DR.
DE LUZ HEIGHTS
SANDRA CREEK DR.
CONQUISTADOR RD.
HARRIS TR.
LUZ RD.

VICINITY MAP
NOT TO SCALE
THOMAS BROTHERS GUIDE PAGE: 997, D-4

APN's

102-084-14; 102-102-10
102-084-15; 102-102-11
102-084-16

GRAPHIC SCALE

0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

DATE: 02/22/12

SAN DIEGUITO ENGINEERING, INC

4407 MANCHESTER, SUITE 105
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PHONE: (760) 753-8525

CIVIL ENGINEERING • PLANNING
LAND SURVEYING

EXISTING, IMPACTED, AND PRESERVED HABITAT ON THE PROJECT SITE					
PLANT COMMUNITY	ACREAGE ON-SITE	IMPACTED ACREAGE	ACREAGE PRESERVED ON-SITE	ACREAGE IMPACTED OFF-SITE	MITIGATION REQUIRED (RATIO)
ORCHARDS & VINEYARDS	219.72	N/A	N/A	N/A	N/A
SOUTHERN COAST LIVE OAK RIPARIAN FOREST	3.47	0	3.47	0	0
COAST LIVE OAK WOODLAND	0.17	0	0.17	0	0
FRESHWATER MARSH	0.07	0	0.07	0	0
URBAN / DEVELOPED	2.40	N/A	N/A	N/A	N/A
UNVEGETATED HABITAT (WETLAND)	2.33	0	2.33	0	0
DISTURBED HABITAT	2.25	N/A	N/A	N/A	N/A
DIEGAN COASTAL SAGE SCRUB	0.38	0	0.38	0	0
TOTAL	238.79	0	6.42	0	0

BIOLOGY LEGEND

- DIEGAN COASTAL SAGE SCRUB
HOLLAND CODE 32500
- DISTURBED HABITAT
HOLLAND CODE 11300
- SCRUB OAK CHAPARRAL
HOLLAND CODE 37900
- COAST LIVE OAK WOODLAND
HOLLAND CODE 71160
- ORCHARDS AND VINEYARDS
HOLLAND CODE 18100
- UNVEGETATED HABITAT
FRESHWATER
HOLLAND CODE 13140
- ROW CROPS
HOLLAND CODE 18320

EASEMENT LEGEND

- NON-NATIVE GRASSLAND
HOLLAND CODE 42200
- URBAN/DEVELOPED
HOLLAND CODE 12000
- SOUTHERN COAST LIVE OAK
RIPARIAN FOREST
HOLLAND CODE 61310
- FRESHWATER MARSH
HOLLAND CODE 52400
- PROPOSED BIOLOGICAL OPEN SPACE INCLUDING 50' BUFFER (NO PROPOSED FIRE CLEARING)
- LIMITED BUILDING ZONE - 100' (ALL AREAS WITHIN 100' OF THE PROPOSED BIOLOGICAL EASEMENT WILL BE A LIMITED BUILDING ZONE EASEMENT OR A STEEP SLOPE EASEMENT)

NOTES:

1. FOR THIS PROJECT, RPO AND CDFG WETLAND BOUNDARIES ARE DELINEATED BY THE EXTENT OF WETLAND VEGETATION AS INDICATED ON THE MAPS BY THE APPROPRIATE HOLLAND CODE COLOR.

2. VEGETATION COMMUNITY MAPPING IS PREPARED USING OVERLAYS OF CURRENT AERIAL PHOTOGRAPHS AND IS VERIFIED ON THE GROUND TO THE GREATEST DEGREE POSSIBLE IN THE ABSENCE OF A SYSTEMATIC LAND SURVEY. ALL VEGETATION AREAS, BOUNDARIES, AND FUEL MODIFICATION ZONE LIMITS ARE ESTIMATES SUBJECT TO FINAL DELINEATION BY A LICENSED PROFESSIONAL LAND SURVEYOR.